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ABSTRACT

This curriculum guide presents guidelines for teaching concepts of Voluntary Simplicity in home economics in Florida. (Voluntary Simplicity is a lifestyle in which individuals choose to live more simply, considering the limited nature of the world's resources.) It is designed for use as a separate unit within different subject matter areas or as suggested learning materials for integrating the concepts in those areas. Section 1 is an introduction to the instructor. The Introduction to Voluntary Simplicity section includes pre-post tests with answer keys for each subject matter area into which Voluntary Simplicity can be integrated. A rationale and activites are presented to provide students with a basic understanding of the concept. Sections 4-8 focus on integrating Voluntary Simplicity into "The New Curriculum Framework for Home Economics in Florida" for (1) wage-earning home economics programs (2) housing, (3) family relations, (4) foods and nutrition, and (5) clothing and textiles. Each section contains overall Voluntary Simplicity unit objectives, activity objectives, glossary, activities, and resource listing. The activity format includes Voluntary Simplicity and activity objectives, background information, directions, and the activity. Several options may be presented. A listing of over 80 resources is appended. (YLB)

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ED208167

INTEGRATING VOLUNTARY SIMPLICITY OF LIFESTYLE INTO HOME ECONOMICS

Projects 9-1E14, 0-1C14, 1-C11

By

Ruth E. Pestle, Project Director

Research Assistants

Leo Christie
Thomas Cornille
Susan Voso Lab
Rebecca Merta
Karol Solomon
Jo Shuford

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College of Home Economics
The Florida State University
Tallahassee, Florida 32306

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Teachers who field tested the materials:

Monteze Barrs
Madison High School

Cynthia Bauer
Plant High School

Susan Braun
Interlachen High School

Mary Bryant
Hamilton Central High School

Marilyn Cherubini
Deland High School

Sharon Cunningham
Deland Seventh Grade Center

Colleen DePasquale
Rockland Middle School

Marguerite Engle
Dade City High School

Geraldine Gardner
Cocoa Beach High School

Ruth Anne Gibson
Bartow High School

Carolyn Major
Sarasota Junior High School

Karen Philman
Bell High School

Ruth Spires
Sarasota Junior High School

Laura Stark
Miller Middle School

Nancy St. John
Deland High School

Carmen Tucker
Titusville High School

THE WHITE HOUSE
WASHINGTON

FELLOW AMERICANS:

Today, America faces the most serious domestic challenge that it is likely to face in our lifetimes - the energy challenge.

Our ability to meet this challenge will help determine whether we will be able to maintain our American way of life during the closing decades of the 20th century. If we ignore the challenge today by failing to act, our children will pay a heavy price for our short sightedness.

. . . By saving energy we can protect jobs, the environment, and the basic American standard of living, not only for ourselves, but also for our children and grandchildren. We must succeed.

Jimmy Carter

> *"There are many ways you can conserve energy in and around your home without sacrificing comfort or convenience. The most obvious direct benefit to you is the money saved on utility bills that can be used for other purposes. You will also be conserving energy resources which may be needed in the future."*
>
> —Governor Bob Graham

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INTRODUCTION TO INSTRUCTOR

WHAT IS VOLUNTARY SIMPLICITY?

Voluntary Simplicity is a lifestyle in which individuals and families choose to live more simply, considering the limited nature of the world's resources. This would include recycling, home production of foods, conservation of nature and energy and an emphasis upon the sharing of skills and companionship.

Perhaps Voluntary Simplicity is best understood when the concepts which make up its name are further defined. Voluntary Simplicity is a lifestyle that people and families choose to adopt freely - this is implicit in the "voluntary" part of the name. "Simplicity" implies a movement away from the complexities of consumerism and a highly technological style of living with dependence upon cars, appliances and other such machines. Taken together, "Voluntary Simplicity" refers to a lifestyle concerned with the integration of cooperative values necessary for the present and future existence of individuals and families - making our lives simpler and cooperating with one another toward a more fulfilling existence.

Voluntary Simplicity is not a new concept to describe an emerging lifestyle. An early reference to Voluntary Simplicity and a description of this lifestyle appeared in an Indian Journal, the Visva Bharati Quarterly by Richard Gregg in 1936. Historically, many other references to the lifestyle described by "Voluntary Simplicity" can be identified. The lifestyle Thoreau describes in Waldon Pond, and the style of living of philosophical-spiritual leaders like Ghandi in India are just two examples.

Although the "back to nature" movement of the 1960's was characterized by some of the values of Voluntary Simplicity, it should not be equated with such a movement. Rather, it goes beyond the counter culture movement toward providing a philosophical and practical basis for response to changes in the environment and society. Many relatively recent environmental and societal changes magnify the need for consideration of lifestyle changes. Among these environmental problems are the world-wide scarcity of fossil fuels, strategic minerals, water and air pollution, and scarcity of protein sources of high biological value. High rates of divorce and apparent loss of purpose and direction of many families are just a few examples of the social factors which effect individuals and families.

Voluntary Simplicity is certainly not seen as the answer to all of these problems, but rather serves as a value basis from which to respond to societal and environmental changes at the individual and family level.

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Instructions for Using the Materials

The following guidelines are provided to aid you in the utilization of this curriculum guide. Naturally, it is up to your discretion as to how to actually utilize the materials because only you know your students and how best to teach them the concepts of Voluntary Simplicity. This curriculum guide is designed for use as a separate unit within different home economics subject matter areas (such as home economics occupations, family living, ect.) or as suggested learning materials for integrating Voluntary Simplicity concepts within those areas. The materials are appropriate for teaching the concepts for the courses listed in the New Curriculum Framework for Home Economics in Florida, 1980. They are also designed to supplement the information presented in the state adopted textbooks on the subject matter areas.

A) Pre-Post Test

You will notice in the table of contents that there is included in the Introduction to Voluntary Simplicity section a pre-post test for each subject matter area. Also, there is an attitude questionnaire listed in the table of contents that is appropriate for use with every subject matter area. Both of these instruments can be administered to the students as the first and the last step when teaching about Voluntary Simplicity of Lifestyle. Each of them should take about 30 minutes for students to complete, so you may want to administer them either in two different class periods or in one. The purpose of the pre- and post- testing is to measure the effectiveness of the learning materials in changing students' level of knowledge and their attitudes, so it is important for the testing to be done as the first step (prior to the introduction) and the last step.

1) Instructions for administering the knowledge pre- and post-test

The knowledge pre-test is designed to measure people's knowledge of Voluntary Simplicity in the subject matter area for which the pre-post-test was designed (home economics occupations, family relations, ect.). The scoring key is provided following each pre-post-test.

2) Instructions for administering the attitude questionnaire

The attitude questionnaire includes 52 items designed to measure peoples' attitudes about Voluntary Simplicity concepts. Please explain to the students that they are asked to express the degree of their agreement or disagreement by circling a number from one through seven in response to each of the statements. Instruct them to respond to all of the statements and to circle only one number for each statement. The method of scoring the attitude questionnaire is explained on the page following the questionnaire.

B) Introducing Voluntary Simplicity to the Students

After administering the pre-tests to your class, you are ready to introduce Voluntary Simplicity to them. To help you with this, please see the sections "Rationale" and "Introduction to Instructor". These two sections present a summary of what Voluntary Simplicity is all about. They are more for your use than for distribution to the students. Once you have read the materials you can present it to the class in whatever way you think will be most effective.

The essential concepts to be gotten from the introductory materials are these:

1) The world has some real and serious problems with energy shortages.
2) Voluntary Simplicity is one workable solution
3) Voluntary Simplicity is not:
    a) a new concept
    b) a back-to-nature movement
4) Voluntary Simplicity is:
    a) a lifestyle
    b) environmental awareness
    c) recycling of goods and materials
    d) conservation of resources
    e) sharing of goods and services
5) Occupations of the future will change as:
    a) natural resources change
    b) work situations change
    c) male/female roles change

As you progress through the learning materials, these ideas will become more focused, but if you can just get across the basics, your students will have enough understanding of Voluntary Simplicity to get them started. It is important to note at this time that the students should do the Introduction to Voluntary Simplicity activities before doing the activities in any of the subject matter areas.

C) Using the Objectives

You will notice that there are two sets of objectives -- Voluntary Simplicity objectives and activity objectives for each subject matter area. The Voluntary Simplicity objectives are more general and are those which students should be able to satisfy after completing the unit. The activity objectives are specific to each activity, but are linked to the Voluntary Simplicity objectives. Students should be able to satisfy activity objectives after completing each specific activity.

At the front of each subject matter area is a list of all the Voluntary Simplicity and activity objectives, along with the numbers of the activities which will help students satisfy the objectives. From this list you can see how the two levels of objectives and the activities are related to each other. The overall Voluntary Simplicity objectives are also printed at the top of each activity to which they are related. This is done so that both you and the students are aware of what is intended to be accomplished by each activity. Do plan to share objectives with the students, because this will help them learn effectively.

D) Integrating Voluntary Simplicity Into the The New Curriculum Framework for Home Economics in Florida

Following the lists of objectives in each of the subject matter areas, is a list of the concepts from The New Curriculum Framework for Home Economics in Florida that are used in the activities in the subject matter areas. This will help you see ways of integrating Voluntary Simplicity into the curriculum required in the State of Florida.

E) The Glossary

Included in each of the subject matter areas is a glossary of terms that students will need to understand in order to get an adequate grasp of Voluntary Simplicity and related concepts. The glossary can be used in 2 ways: first, it can be used as an activity, done before beginning the learning activities so that students can understand the terminology beforehand. The other way to use it is as a reference for use during the learning activities, when terms come up and students do not understand them.

The glossary is one part of this curriculum guide that you will probably want to duplicate so that each student can have his or her own copy.

F) What to do with the Activities

The activities in this curriculum guide are presented in a format which includes a name and number for each activity, the Voluntary Simplicity and activity objectives, specific instructions to the teacher for how to use the activity, some background information, and the activity itself. Usually, several options are presented so that you can select the best way for you and your class to approach the activity and meet the objectives. Do share the objectives with the class and do share the background information where applicable. Whether you duplicate these materials or whether you teach them verbally depends on the format of the specific activity and on your preference for presenting it. For example, some of the background material could be duplicated and assigned for homework reading, or you might choose to present it in class yourself.

Overall, your job will be to make sure the students understand the activity, to facilitate whatever tasks are called for, and to lead class discussions where they are included. To help you with this, very specific guidelines are written into each activity.

G) The Resource Listing

At the end of each subject matter area you will find a listing of resources that you will be able to use to expand on your own and your students' understanding of Voluntary Simplicity. The listing is organized into the following categories:

1) Audio-Visual Materials
2) Books
3) Magazines
4) Pamphlets
5) Articles
6) Composite Listings of Voluntary Simplcity-Related Materials
7) Other Teaching Materials

Where possible, descriptions, prices, and ordering information have been included for your convenience. It is recommended that you look through the resource listing before you begin teaching about Voluntary Simplicity of Lifestyle so that you can order any materials you may want to use.

Student Name________________________

KNOWLEDGE TEST
HOME ECONOMICS OCCUPATIONS

Pre- and Post-test for Students

Multiple Choice: Place the letter which matches the one correct answer in the blank next to each question number.

_____1. Disadvantages of working an 8 to 5, 40-hour week include all of the following except:
a) rush hours
b) child care costs
c) higher gasoline prices
d) electrical usage peaks

_____2. Job sharing is an arrangement in which:
a) one worker shares in several jobs
b) one full-time job is shared by more than one worker
c) one worker holds two or more part-time jobs
d) none of the above

_____3. Overall, women who work full time earn:
a) about as much as men who work full time
b) about 50¢ for each $1.00 earned by men who work full time
c) about 60¢ for each $1.00 earned by men who work full time
d) about 90¢ for each $1.00 earned by men who work full time

_____4. A worker with an "environmental conscience" would probably be the most concerned about which of the following in selecting a job:
a) how performing the job will help or hurt people and the earth
b) what kind of benefits the job gives the worker
c) how flexible the working hours are
d) how the duties of the job may change in the future

_____5. If a person works on a "flexi-time" arrangement, he or she can:
a) work 4, 10-hour days instead of 5, 8-hour days
b) work from 6 a.m. to 2 p.m. each day instead of 9 a.m. to 5 p.m.
c) work some evening hours instead of day time hours
d) any of the above

_____6. Voluntary Simplicity includes all of the following except:
a) home production of food
b) energy conservation
c) doing without the comforts of life
d) recycling of goods and materials

_____7. Male and female sex roles developed over the years because:
a) men are stronger than women
b) women are better homemakers than men
c) men are "naturally" providers
d) women bear children and men do not

_____8. An example of sex role stereotyping is the idea that:
a) there are some jobs that women just can not do
b) men can be just as good parents as women
c) women and men should have the same job opportunities
d) some people are better workers than others

_____9. Which of the following is NOT an example of putting Voluntary Simplicity into your job?
a) sharing rides with co-workers
b) making suggestions for conserving water on the job
c) driving to work alone
d) turning off unneeded lights

____10. Jobs that exist today may be very different 10 years from now because:
a) there will be a shortage of money
b) resources like oil may be scarce
c) there will not be enough workers to fill all the jobs
d) all of the power will be supplied by nuclear reactors

____11. New occupations which develop during the next 15 years may include which of the following:
a) county agent for home solar heating consultation
b) nuclear power plant engineer
c) oil well driller
d) city mass transit director

____12. An example of an occupation that may create problems for future generations is:
a) solar engineer
b) recycling technician
c) plumber
d) nuclear waste disposal technician

____13. Which of the following best describes a role?
a) a list of members of an organization
b) the description of a person's job
c) the ways people are expected to act with each other
d) the way that a worker performs his/her job

____14. Peak electrical usage times are expensive because:
a) they require using smaller, less efficient equipment at the generating plant
b) they waste fossil fuels
c) they may cause brownouts
d) all of the above

____15. A single parent who is considering getting a job has to consider all of the following except:
a) public attitudes toward working mothers
b) money earned versus cost of transportation, child care, clothes, etc.
c) types of child care available
d) public transportation that might be available

____16. Americans, who comprise 5.4 percent of the world's population, use _____ percent of the world's resources.
a) 5
b) 10
c) 30
d) 50

____17. Which of the following is not a concern in today's society:
a) acid rain
b) water pollution
c) solar waste
d) chemical dumps

____18. The kinds of tasks or activities which people are expected to perform are called their
a) personality
b) role
c) destiny
d) lot in life

____19. The difference between active and passive solar energy is that:
a) active requires electrical power to move heated air or water
b) passive requires electrical power to move heated air or water
c) active, but not passive, can be used to heat a home
d) passive, but not active, can be used to heat a home

____20. Voluntary Simplicity of Lifestyle includes all of the following except;
a) home production of food
b) energy conservation
c) doing without the comforts of life
d) recycling of goods and materials

____21. The main electrical usage peak is from:
a) 8 a.m. to 12 p.m.
b) 1 p.m. to 5 p.m.
c) 5 p.m. to 9 p.m.
d) 9 p.m. to 1 a.m.

____22. Which of the following is not a fossil fuel?
a) nuclear fission
b) petroleum
c) natural gas
d) coal

____23. Recycling helps preserve a rich natural environment by:
- a) reducing pollution
- b) conserving scarce resources
- c) saving re-usable products
- d) all of the above

____24. The term "lifestyle" includes which of the following?
- a) attitudes
- b) living arrangements
- c) occupational choice
- d) all of the above

____25. In the past, Voluntary Simplicity of Lifestyle has been practiced by all but one of the following groups of people:
- a) people who lived through the depression of the 1930's
- b) people who lived during the "Roaring Twenties"
- c) pioneers who crossed the western frontier
- d) people who lived during world War II

True/False: Determine whether each of the following statements are true or false. If the statement is true, circle the "T" at the beginning of the statement. If it is false, circle the "F" at the beginning of the statement.

T or F 26. A worker in a factory which pollutes the environment has no reponsibility for environmental damage. He or she is just doing his/her job.

T or F 27. Most half-time jobs pay ½ the normal benefits (like sick pay and vacation).

T or F 28. One of the advantages of part-time or flexi-time jobs for parents is that parents can spend more time with their children.

T or F 29. The kinds of jobs we choose and how we perform them can effect people in future generations.

T or F 30. Shortages of natural resources can change the kinds of jobs that will be available in the future.

T or F 31. Importing great quantities of a scarce natural resource hurts people in other nations.

T or F 32. Voluntary Simplicity is a new idea that has come about in the last 5 years.

T or F 33. Voluntary Simplicity means the same as moving "back to nature".

T or F 34. Environmental conscience is an approach to life in which concern for the environment is an important part of all decisions.

T or F 35. The main reason why women are usually not hired for executive jobs is that they are too emotional to make level-headed decisions.

Answer Key

1. C
2. B
3. C
4. A
5. D
6. C
7. D
8. A
9. C
10. B
11. A
12. B
13. C
14. D
15. A
16. C
17. C
18. B
19. A
20. C
21. C
22. A
23. D
24. D
25. B
26. F
27. F
28. T
29. T
30. T
31. T
32. F
33. F
34. T
35. F

Student Name_________________________

KNOWLEDGE TEST
HOUSING

Pre- and Post-test for Students

Multiple Choice: Place the letter which matches the one correct answer in the blank next to each question number.

_____1. Voluntary Simplicity of Lifestyle includes all of the following except:
a) home production of food
b) energy conservation
c) doing without the comforts of life
d) recycling of goods and materials

_____2. A deciduous tree is one which:
a) has needles instead of leaves
b) loses its leaves in fall
c) bears flowers in the spring
d) lasts for only one season and then dies

_____3. Insulation is used to:
a) keep homes warm in winter
b) keep homes cool in summer
c) improve the efficiency of heaters and air conditioners
d) all of the above

_____4. The difference between active and passive solar energy is that:
a) active, but not passive, can be used to heat a home
b) passive, but not active, can be used to heat a home
c) active requires electrical power to move heated air or water
d) passive requires electrical power to move heated air or water

_____5. The three biggest users of energy in the average Florida home are:
a) refrigeration, air conditioning, and water heating
b) refrigeration, space heating, and air conditioning
c) refrigeration, cooking, and lighting
d) refrigeration, air conditioning, and lighting

_____6. The main home electrical usage peak is from:
a) 8 a.m. to 12 p.m.
b) 1 p.m. to 5 p.m.
c) 5 p.m. to 9 p.m.
d) 9 p.m. to 1 a.m.

_____7. Cross-ventilation means:
a) building a home across from a vacant lot
b) opening windows on opposite sides of a building to let air flow through
c) planting shrubs on the windward side of a house
d) opening drapes to let the sun shine in

_____8. Nighttime cooling involves cooling a home during the night by:
a) running the air conditioner only at night
b) closing windows to keep the air-conditioned air inside
c) not using air conditioning at all
d) opening window at night to let the cool night air in

_____9. Air conditioning costs can be reduced by all of the following except:
a) setting the thermostat at a very low temperature
b) replacing filters frequently
c) having the equipment serviced regularly
d) keeping draperies closed on windows facing the sun

_____10. Which of the following statements about solar energy is not true? Solar energy is ....
a) available in most parts of the world
b) almost inexhaustable in quantity
c) a highly polluting form of energy
d) free for the taking

_____11. Which of the following practices can make a refrigerator less energy efficient?
a) opening the door only briefly
b) defrosting only after 2 inches of frost has built up
c) keeping the refrigerator more than half full
d) cleaning the refrigeration coils regularly

_____12. Which of the following wastes hot water?
a) taking baths instead of showers
b) running small loads in the dishwasher
c) setting the thermostat at 160°
d) all of the above

_____13. In order to have trees shade a home in summer and let the sun's warmth through in winter, a person can:
a) plant deciduous trees
b) cut trees down in winter
c) plant trees in portable planters so they can be moved
d) plant trees which have no leaves

_____14. Which of the following energy-saving features is not available in homes today?
a) double-pane windows
b) power attic ventilators
c) solar collection panels
d) mini nuclear reactors

____15. Installing an air conditioning system near the center of the house saves energy because:
a) the air has less chance to warm up on the way to other rooms
b) the cooled air has less distance to travel, so the fan doesn't have to work so hard
c) all the rooms can be cooled to about the same level of comfort
d) all of the above

____16. A typical characteristic of air is that:
a) hot air rises
b) cold air rises
c) both hot and cold air rises

____17. Heat travels faster through
a) wet materials
b) dry materials

____18. Families can conserve energy by planting deciduous trees on the
a) south side of their home
b) north side of their home
c) east side of their home
d) west side of their home

____19. In selecting an apartment, a person who believed in Voluntary Simplicity of Lifestyle would
a) inquire about former utility bills
b) select a ground floor apartment
c) inquire about the source of heat
d) select a second floor apartment

____20. The public lacks complete agreement about all of the following issues except;
a) the safety of atomic waste procedures
b) the need to prevent air pollution
c) the amount of national forests to preserve

____21. All of the following items would reduce energy consumption in the home except:
a) drain one gallon of water from the bottom of the hot water tank every two months
b) use tight fitting lids on pots and pans
c) use kitchen and bathroom exhaust fans whenever the rooms are in use
d) install insulating drapes or interior shades

____22. The electric meter:
a) is read from right to left
b) tells how many watts of electricity have been used
c) tells how many volts of electricity have been used
d) tells how many kilowatts of electricity have been used

____23. All of the following can contribute to natural cooling of a home except
a) attic fans
b) shading
c) cross-ventilation
d) nighttime cooling

____24. Americans, who comprise 5.4 percent of the world's population, use _____ percent of the world's resources
a) 5
b) 10
c) 30
d) 50

____25. Which of the following is not a concern in today's society:
a) acid rain
b) water pollution
c) solar waste
d) chemical dumps

True/False: Determine whether each of the following statements are true or false. If the statement is true, circle the "T" at the beginning of the statement. If it is false, circle the "F" at the beginning of the statement.

T or F 26. Importing great quantities of a scarce natural resource hurts people in other nations.

T or F 27. Voluntary Simplicity is a new idea that has come about in the last five years.

T or F 28. Voluntary Simplcity means the same as moving "back to nature".

T or F 29. B.T.U. stands for British Thermal Unit.

T or F 30. An example of a fossil fuel is nuclear energy.

T or F 31. Only a house's outside walls require insulation.

T or F 32. Carpooling is one way of practicing Voluntary Simplicity.

T or F 33. Sometimes energy can be saved by using household appliances in "off" hours.

T or F 34. By placing trees and shrubs around a house, the house can be kept warmer in winter and cooler in summer.

T or F 35. Solar energy is the energy produced by fires started by the sun's radiation.

Answer Key

1. c
2. b
3. d
4. c
5. a
6. c
7. b
8. d
9. a
10. c
11. b
12. d
13. a
14. d
15. d
16. a
17. a
18. a
19. c
20. a
21. c
22. d
23. a
24. c
25. c
26. T
27. F
28. F
29. T
30. F
31. T
32. T
33. T
34. T
35. F

Student Name:______________________

KNOWLEDGE TEST
FAMILY LIVING

Pre- and Post-test for Students

Multiple Choice: Place the letter which matches the one correct answer in the blank next to each question number.

_____1. Which of the following is NOT a fossil fuel?
   a. petroleum
   b. natural gas
   c. coal
   d. nuclear fission

_____2. The nuclear family is defined as:
   a. all family members (mother, father, children, grandparents, aunts, uncles, and cousins) living together in one household.
   b. a family where the children make all the decisions
   c. a family composed of a husband, a wife, and their children, living in the same household
   d. none of the above

_____3. If we continue to use petroleum in this country at the present rate, scientists estimate that we will run out in:
   a. 500 years
   b. 35,0000 years
   c. 3500 years
   d. 35 years

_____4. Reduction of energy use in the U.S. can be accomplished through
   a. changes in family lifestyle
   b. changes in transportation patterns
   c. changes in appliance usage in the home
   d. all of the above

_____5. Voluntary Simplicity includes all of the following except:
   a. home production of food
   b. energy conservation
   c. doing without the comforts of life
   d. recycling of goods and materials

_____6. Which of the following is NOT an example of putting Voluntary Simplicity into your job?
   a. sharing rides with co-worders
   b. making suggestions for conserving water on the job
   c. driving to work alone
   d. turning off unneeded lights

_____7. The term "lifestyle" includes which of the following?
a. attitudes
b. living arrangements
c. occupational choice
d. all of the above

_____8. Active solar energy is
a. use of the sun's energy which requires electrical power to move heated air or water
b. use of the sun's energy which requires no mechanical devices
c. not possible with today's available equipment
d. use of the sun's energy to move solar-powered automobiles

_____9. Non-renewable resources are natural products which:
a. cannot be imported from other countries
b. once used up, cannot be replaced because nature takes a very long time to form them
c. once used up, must be replaced by foreign imports
d. are irreplaceable because they cost too much

____10. Recycling helps preserve a rich natural environment by:
a. reducing pollution
b. conserving scarce resources
c. saving re-usable products
d. all of the above

____11. Currently, in the state of Florida air conditioning and heating water account for about:
a. 24.6% of the total residential energy use
b. 58.5% of the total residential energy use
c. 24.6% of the total energy use
d. 58.5% of the total energy use

____12. Which one of the following appliances uses the most energy?
a. microwave oven
b. iron
c. frostfree refrigerator
d. clothes dryer

____13. In the United States, nonrenewable fossil fuels account for
a. 24% of the total energy use
b. 63% of the total energy use
c. 76% of the total energy use
d. 92% of the total energy use

____14. Which of the following is NOT an example of putting Voluntary Simplicity into your homelife?
a. opening the refrigerator frequently
b. weatherstripping your windows
c. using shower restrictors
d. swapping services with neighbors

____15. Which one of the following types of transportation gets the lowest passenger miles per gallon?
a) car carrying 4 people
b) bus carrying 40 people
c) train carrying 1,000 people
d) DC jet carrying 100 people

____16. Male and female sex roles developed over the years because:
a) men are stronger than women
b) women are better homemakers than men
c) men are "naturally" providers
d) women bear children and men do not

____17. All of the following are expected to be more common in the future _except_:
a) metric measurements
b) fossil fuels
c) solar water heaters
d) home computers

____18. It is possible for the people in a neighborhood to work together to complete all of the following _except_:
a) recycling centers
b) food cooperatives
c) city ordinances

____19. Which of the following is _not_ true of neighborhood associations?
a) neighborhood associations require time for development
b) neighborhood associations increase people's sense of belonging
c) neighborhood associations are expensive to get started
d) neighborhood associations help people to develop friendships

____20. In order to save any energy in a house
a) everyone must turn off unnecessary lights
b) cooking must be done fewer days a week
c) someone has to care about energy use
d) laundry must be done in cold or warm, not hot water

____21. All of the following items would reduce energy consumption in the home _except_:
a) drain one gallon of water from the bottom of the hot water tank every few months
b) use tight fitting lids on pots and pans
c) use kitchen and bathroom exhaust fans whenever the rooms are in use
d) install insulating drapes or interior shades

____22. Which of the following does not contribute to reduced gas mileage in a car
a) four-speed transmission
b) powerful engine
c) engine reliability
d) high MPG ratings

____23. Which of the following products are not currently being recycled:
a) newspapers
b) aluminum
c) bottles
d) steel

____24. A genogram is
a) a telegram sent to an elderly person
b) a type of a family tree
c) a contract on a person's life

____25. A single parent who is considering getting a job has to consider all of the following except:
a) money earned versus cost of transportation, child care, and clothes
b) types of child care available
c) public transportation that might be available
d) public attitudes toward working mothers

True/False: Determine whether each of the following statements is true or false. If the statement is true, circle the "T" at the beginning of the statement. If it is false, circle the "F" at the beginning of the statement.

T or F 26. Importing great quantities of a scarce natural resource hurts people in other nations.

T or F 27. Voluntary Simplicity is a new idea that has come about during the last 5 years.

T or F 28. Voluntary Simplicity means the same as moving "back to nature".

T or F 29. The U.S. uses more energy, per capita, than any other country in the world.

T or F 30. Almost 20% of all energy consumed in the U.S. is used in our households.

T or F 31. In the last 15 years, there has been a decrease in the number of married women working outside of the home.

T or F 32. Frost-free refrigerators and/or freezers use more energy than standard units.

T or F 33. Scientists estimate that we have 500 years left of usable petroleum and natural gas at the present rate of use.

T or F 34. PMPG stands for "Programmed Management of Passenger Groups".

T or F 35. In order for mass transit systems to work well, they must be convenient to use.

Answer Key

1. D
2. C
3. D
4. D
5. C
6. C
7. D
8. A
9. B
10. D
11. B
12. C
13. C
14. A
15. B
16. D
17. B
18. C
19. C
20. C
21. C
22. B
23. D
24. B
25. D
26. T
27. F
28. F
29. T
30. T
31. F
32. T
33. F
34. F
35. T

Student Name________________________

KNOWLEDGE TEST
FOOD AND NUTRITION

Pre- and Post-test for Students

Multiple Choice: Place the letter which matches the one correct answer in the blank next to each question number.

_____1. Voluntary Simplicity is a lifestyle in which individuals and families:
- a) live more simply
- b) give up modern conveniences
- c) "go back to nature"
- d) do not do anything that is difficult

_____2. A lifestyle practice that does not represent the philosophy of Voluntary Simplicity is:
- a) baking oven meals
- b) bringing your lunch
- c) throwing away leftovers
- d) storing food properly

_____3. Unit Pricing
- a) helps customers understand the cost of inflation
- b) is the cost of food items
- c) is mandatory in all major grocery stores
- d) helps customers compare the cost of similar food items

_____4. It is a good practice to prepare a shopping list because:
- a) the consumer is less likely to buy sale items
- b) the consumer is less influenced to impulse buy
- c) the consumer will have a record of food items purchased
- d) the list prevents the consumer from using advertising coupons

_____5. Cooking time is the time:
- a) required to assemble equipment and mix food
- b) that is also known as active time
- c) that usually requires little or no attention from the chef
- d) that is mostly eliminated when using convenience foods

_____6. Which of the following is not a Voluntary Simplicity shopping trip?
- a) share a ride to the grocery with a friend
- b) never shop when hungry
- c) shop as often as possible
- d) comparison shop

_____7. To calculate the cost of a kilowatt hour, one need only know:
a) the number of kilowatt hours used and the cost of a kilowatt hour
b) the amps and the cost of a kilowatt hour
c) the watts and the number of hours an appliance was used
d) the number of kilowatt hours used and the amps

_____8. It is not a good idea to shop at small convenience stores because:
a) convenience stores sell food items that the consumer does not need
b) convenience stores sell junk food
c) the consumer cannot comparison shop in a convenience store
d) food items are usually more expensive in convenience stores than in large grocery stores

_____9. All of the following, but one, are ways to reduce energy consumption when cooking:
a) keep range top burners and reflectors clean
b) use large amounts of water when cooking
c) bake oven meals
d) defrost all food before cooking

____10. Eating grain-fed beef every night is not compatible with a Voluntary Simplicity Lifestyle because:
a) it takes more energy to produce a pound of grain fed beef than to produce a pound of grain
b) grain-fed beef contains pesticides and antibiotics that are harmful to man
c) it takes 20 pounds of grain to produce one pound of beef
d) grain-fed beef is more difficult to prepare than grass-fed beef.

____11. All of the following, but one, are ways to reduce energy used by the refrigerator/freezer:
a) keep the freezer as full as possible
b) replace faulty gaskets
c) avoid frost build-up
d) keep the refrigerator at 25°F

____12. Installing an aerator in the kitchen sink will:
a) increase the flow pressure
b) filter the impurities out of the water
c) reduce the amount of water in the flow
d) reduce the amount of air in the water

____13. A developed country, such as America, is not characterized by:
a) low birth rates
b) limited education
c) high incomes
d) much technological development

____14. A developing country, such as Honduras or Kenya is not characterized by:
a) literacy
b) low life expectancy
c) high infant mortality
d) high birth rates

____15. A meal that contains a complete protein source can be prepared by serving:
a) seeds and nuts at the same meal
b) walnuts and wheat at the same meal
c) pecans and sunflower seeds at the same meal
d) grains and legumes at the same meal

____16. The U.S. has 6% of the world's resources but consumes about:
a) 4% of the world's resources
b) 6% of the world's resources
c) 30% of the world's resources
d) 90% of the world's resources

____17. In the past, Voluntary Simplicity of Lifestyle has been practiced by all but one of the following groups of people:
a) people who lived through the depression of the 1930's
b) people who lived during the "Roaring Twenties"
c) pioneers who crossed the western frontier
d) people who lived during World War II

____18. The four food groups, which are useful in planning nutritious meals, are:
a) the milk group, the meat group, the fruit group, and the vegetable group
b) the fat group, the protein group, the carbohydrate group and the sugar group
c) the milk group, the protein group, the vegetable group, and the fruit group
d) the meat group, the dairy group, the fruit and vegetable group, and the fruit group

____19. To save energy one should do all but one:
a) run the dishwasher only when full
b) use half the amount of detergent recommended by the manufacturer
c) run the dishwasher only during the cooler part of the day
d) let the dishes air dry

____20. Proteins are composed of smaller molecules called:
a) amino acids
b) glucose
c) sucrose
d) lipases

____21. All of the following, but one, are complete protein foods
a) milk
b) meat
c) eggs
d) vegetables

____22. Convenience foods are:
a) foods that can be eaten with little or no preparation
b) junk foods

____23. When rinsing dishes it is important to:
a) hold them under hot running water
b) dip them in a container of rinse water
c) remember that rinsing is not necessary if you are towel drying the dishes

____24. Which of the following is not a concern in today's society:
a) acid rain
b) water pollution
c) solar waste
d) chemical dumps

____25. The term "lifestyle" includes which of the following?
a) attitudes
b) living arrangements
c) occupational choice
d) all of the above

True/False: Determine whether each of the following statements are true or false. If the statement is true, circle the "T" at the beginning of the statement. If it is false, circle the "F" at the beginning of the statement.

T or F 26. Voluntary Simplicity is a new idea that has come about in the last five years.

T or F 27. Voluntary Simplicity means the same as moving "back to nature".

T or F 28. Convenience foods are more expensive than their less processed or homemade counterpart.

T or F 29. The best time to grocery shop is when you are hungry.

T or F 30. Legumes may be used as a meat substitute because of their high protein content.

T or F 31. The best time to use the oven is during the hours of 4:00 and 6:00 p.m.

T or F 32. Unit pricing is a system that permits customers to compare the cost of products without having to do arithmetic.

T or F 33. The goal of effective advertising is to help the consumer get the best products for his/her money.

T or F 34. Use of a microwave oven is more energy efficient than a regular oven regardless of the amount of food being prepared.

T or F 35. The electric meter tells how many kilowatt hours of electricity are being used.

Answer Key

1. A
2. C
3. D
4. B
5. C
6. C
7. A
8. D
9. B
10. A
11. D
12. C
13. B
14. A
15. D
16. C
17. B
18. D
19. B
20. A
21. A
22. A
23. B
24. C
25. D
26. F
27. F
28. F
29. F
30. T
31. F
32. T
33. F
34. F
35. T

Student Name________________________

KNOWLEDGE TEST
CLOTHING AND TEXTILES

Pre- and Post-test for Students

Multiple Choice: Place the letter which matches the one correct answer in the blank next to each question number.

_____1. Selecting fabrics that require ______drying time saves energy.
- a) shorter
- b) longer

_____2. Washing in ______ water saves energy.
- a) cold
- b) warm

_____3. Line drying clothes ______ save energy.
- a) helps
- b) does not help

_____4. A 100% cotton shirt uses ______ energy than a cotton/polyester blend shirt to launder and dry.
- a) less
- b) more

_____5. Experimenters ______ testing different kinds of covering for windows that would be more energy efficient
- a) are
- b) are not

_____6. To keep cool in summer ______ use soft cotton flannel sheets on the bed.
- a) do
- b) do not

_____7. Cut velvet towels absorb moisture ______ than looped terry towels.
- a) faster
- b) slower

_____8. Wearing the right clothing ______ save on heating or cooling costs.
- a) can
- b) can not

_____9. Our bodies lose heat when the surrounding temperature is ______ the temperature of the body.
- a) more than
- b) less than

____10. Air trapped in clothing is a ______ insulator from the cold.
a) good
b) bad

____11. ______fabrics are a better insulator in cold weather.
a) Woven
b) Knit

____12. ______ keep hands the warmest in cold weather.
a) Gloves
b) Mittens

____13. Virgin wool means: ______
a) has been used, but not in clothing.
b) has not been used in any product.

____14. The ______ fabric there is in seam allowances or hems, the better the quality of the garment.
a) more
b) less

____15. Textiles used for the home ______ be reused for clothing.
a) can
b) can not

____16. When hanging up good clothes use ______.
a) wire hangers
b) padded hangers

____17. Store shoes ______
a) on the closet floor
b) on the closet shelf

____18. When you shop, ask yourself "Do I really ______ this?"
a) want
b) need

____19. Build a wardrobe on a ______ "look" so items will be appropriate for a number of seasons.
a) stylish
b) classic

____20. The most important point to keep in mind when buying for a career wardrobe is ______.
a) fashion
b) quality

____21. Voluntary Simplicity includes all of the following except:
a) home production of food
b) energy conservation
c) doing without the comforts of life
d) recycling of goods and resources

____22. Which of the following is NOT an example of practicing Voluntary Simplicity when using clothing and textiles?
a) lining draperies to keep out cold air
b) insulating the floor with carpeting and padding
c) adding a layer of insulation to the attic
d) buying vinyl covered furniture for the sun porch

____23. Which of the following is NOT a reason for practicing Voluntary Simplicity of Lifestyle?
a) scarce high protein value foods
b) keeping up with the Jones
c) scarce fossel fuels
d) water pollution

____24. Maintaing the appearances of our clothing requires the use of energy for:
a) heating water
b) washing
c) drying
d) all of the above

____25. When selecting appliances consider:
a) cost and options
b) energy required and energy costs
c) model number
d) a and b
e) a and c

____26. Which of the following kinds of textiles can be used in the home to save energy?
a) upholstery fabric
b) carpeting
c) draperies
d) all of the above
e) b and c

____27. To be effective in reducing heat gain in summer and heat loss in winter, draperies should:
a) be made of a lightweight see through material
b) overlap at the center when closed
c) hang to the floor
d) b and c
e) all of the above

____28. The insulating value of clothing is affected by:
a) morning air
b) reduced air space
c) moisture
d) a, b and c
e) a and c

____29. The following fabric selections are good for keeping warm except:
- a) quilted fabrics
- b) goose down or small feathers
- c) vinyl
- d) wool

____30. To keep cool in summer wear fabrics that do all the following except:
- a) are soft and clinging
- b) are lightweight
- c) are absorbent
- d) have soil release finishes

____31. To save energy in hot or cold weather wear clothes that:
- a) can be line dried
- b) can be washed in hot water
- c) don't need ironing
- d) a and c
- e) all of the above

____32. Used clothing may be found in all of the following places except
- a) going-out-of-business sales
- b) garage sales
- c) flea markets
- d) thrift shops
- e) the Salvation Army

____33. If you decide to purchase used clothing, pay no more than ______ of the price of a comparable new item.
- a) 50%
- b) 15%
- c) 25%
- d) 40%

____34. To extend the useful life of a garment we can do all of the following except:
- a) mend rips
- b) darn holes
- c) cut out the good fabric for other projects
- d) fix zippers
- e) lengthen or shorten the hem

____35. To get your money's worth from your present wardrobe:
- a) buy items that go with it
- b) repair items promptly
- c) store items properly
- d) b and c
- e) all of the above

True/False: Determine whether each of the following statements are true or false. If the statement is true, circle the "T" at the beginning of the statement. If it is false, circle the "F" at the beginning of the statement.

T or F 36. Voluntary Simplicity is a new idea that has come about during the last 5 years.

T or F 37. Voluntary Simplicity means the same as moving "back - to - nature."

T or F 38. Environmental conscience is an approach to life in which concern for the environment is an important part of all decisions.

T or F 39. Necessity is the Mother of Invention.

T or F 40. A 100% cotton fabric uses more energy to dry than 100% polyester.

T or F 41. At sunny windows open curtains in summer and close them in winter to save energy.

T or F 42. Napped or pile fabrics have many little spaces where trapped air can hold body heat.

T or F 43. The faster and better moisture is absorbed away from the body the more chance there is of feeling chilly after bathing.

T or F 44. The most effective use of textiles for saving energy in the home is achieved by using fiberglass batting in the walls, floors and attics.

T or F 45. When dressing to keep warm wear light colored fabrics.

T or F 46. Wear scarves, belts and ties to keep cool in summer.

T or F 47. In order to keep cool in warm weather, wear the least number of clothing layers.

T or F 48. Buying new clothes when fashions change costs a lot of money.

T or F 49. Lined garments usually do not provide a better fit.

T or F 50. An important key to wise wardrobe shopping is organization.

Answer Key

1. A
2. A
3. A
4. B
5. A
6. B
7. B
8. A
9. B
10. A
11. B
12. B
13. B
14. A
15. A
16. B
17. B
18. B
19. B
20. B
21. C
22. D
23. B
24. D
25. D
26. D
27. D
28. D
29. C
30. A
31. D
32. A
33. C
34. C
35. D
36. F
37. F
38. T
39. T
40. T
41. F
42. T
43. F
44. T
45. F
46. F
47. T
48. T
49. F
50. T

VOLUNTARY SIMPLICITY OF LIFESTYLE

ATTITUDE QUESTIONNAIRE

Ruth Pestle, Thomas Cornille, and
Karol Solomon

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VOLUNTARY SIMPLICITY OF LIFESTYLE ATTITUDE QUESTIONNAIRE

Name ______________________________

Please respond to the following statements using this format: Circle the number to the right of each statment according to how you feel.

MARK:
1 - for strongly disagree (SD)
2 - for disagree (D)
3 - for mildly disagree (MD)
4 - for undecided or no opinion (UND)
5 - for mildly agree (MA)
6 - for agree (A)
7 - for strongly agree (SA)

Circle only one number for each statement.

1.	Combining errands to save gasoline is important.	1	2	3	4	5	6	7
2.	Gardening is too dirty for me.	1	2	3	4	5	6	7
3.	I would much rather pay for something new than to use something old over again.	1	2	3	4	5	6	7
4.	The most important purpose of a job is to earn money.	1	2	3	4	5	6	7
5.	I don't care much about growing my own foods.	1	2	3	4	5	6	7
6.	Reducing water pollution is beneficial for almost everyone.	1	2	3	4	5	6	7
7.	I like the taste of food that has been home grown better than food from a grocery store.	1	2	3	4	5	6	7
8.	I am concerned that what I buy will last a long time and need few repairs.	1	2	3	4	5	6	7
9.	More people should be involved in the protection of our environment.	1	2	3	4	5	6	7
10.	I really like the idea of growing what I eat.	1	2	3	4	5	6	7
11.	I am concerned about human rights in other nations.	1	2	3	4	5	6	7
12.	Even if it's hard work, I would like to grow some of my own foods.	1	2	3	4	5	6	7
13.	If I were to move, one important consideration would be the quality of air in the new area.	1	2	3	4	5	6	7
14.	It is my responsibility to recycle used things.	1	2	3	4	5	6	7
15.	Improving the insulation in a house is not worth the trouble.	1	2	3	4	5	6	7
16.	I grow my own foods.	1	2	3	4	5	6	7
17.	The people who run factories should be concerned about pollution.	1	2	3	4	5	6	7
18.	Saving electricity is of benefit to everyone.	1	2	3	4	5	6	7
19.	I would rather grow some of my own vegetables than buy them all at the store.	1	2	3	4	5	6	7
20.	Planting fruit trees is a good idea.	1	2	3	4	5	6	7
21.	I would like to spend some of my spare time learning about growing my own foods.	1	2	3	4	5	6	7
22.	The more buttons a blender has, the better it is.	1	2	3	4	5	6	7
23.	If I have to travel less than one mile I walk or ride a bike rather than drive.	1	2	3	4	5	6	7
24.	I save scrap paper for future use.	1	2	3	4	5	6	7
25.	Cars over five years old are not worth the trouble of upkeep.	1	2	3	4	5	6	7

		SD	D	MD	UND	MA	A	SA
26.	It is my responsibility to recycle used goods.	1	2	3	4	5	6	7
27.	If I had a choice, I would buy a new car rather than a used one.	1	2	3	4	5	6	7
28.	I use public transportation whenever I can.	1	2	3	4	5	6	7
29.	Growing my own vegetables would be worthwhile.	1	2	3	4	5	6	7
30.	It seems like a good idea for more than one family to use the same washing machine.	1	2	3	4	5	6	7
31.	I would rather drive my own car, than depend on others for a ride.	1	2	3	4	5	6	7
32.	Riding a bike or walking to school (work), rather than driving, is a good idea.	1	2	3	4	5	6	7
33.	I grow my own fruits and vegetables.	1	2	3	4	5	6	7
34.	I can think of many ways to reuse trash and garbage.	1	2	3	4	5	6	7
35.	The more money I make this year, the happier I'll probably be.	1	2	3	4	5	6	7
36.	Recycling should be practiced by everyone.	1	2	3	4	5	6	7
37.	I don't like buying clothes that aren't new.	1	2	3	4	5	6	7
38.	It is very important to eliminate unnecessary trips in one's car.	1	2	3	4	5	6	7
39.	Growing my own vegetables would be too much work.	1	2	3	4	5	6	7
40.	The most important purpose of a job is to earn money.	1	2	3	4	5	6	7
41.	If I had a choice, I would dry my clothes on a line rather than in a clothes dryer.	1	2	3	4	5	6	7
42.	I feel better about myself when I wear new clothes.	1	2	3	4	5	6	7
43.	I carpool.	1	2	3	4	5	6	7
44.	Reusing fabrics accomplishes nothing worthwhile.	1	2	3	4	5	6	7
45.	I think collecting newspapers is a good idea.	1	2	3	4	5	6	7
46.	The most important purpose of a job is to earn money.	1	2	3	4	5	6	7
47.	I am willing to be paid for something with exchange of services instead of money.	1	2	3	4	5	6	7
48.	To me, finding new uses for discarded things is not worth the trouble.	1	2	3	4	5	6	7
49.	On a cold day, I would rather put on a sweater than turn up the heat.	1	2	3	4	5	6	7
50.	I think it is important to drive within the speed limit to help conserve gasoline.	1	2	3	4	5	6	7
51.	I never worry about the usefulness of what I throw away.	1	2	3	4	5	6	7
52.	Canning and preserving my own foods would take up too much of my time.	1	2	3	4	5	6	7

Scoring Directions

This attitude questionnaire includes 52 items designed to measure peoples' attitudes about Voluntary Simplicity concepts. The scoring method is a three step process, as follows:

a) Add together the circled responses from items:

1
6
7
8
9
10
11
12
13
14
16
17
18
19
20
21
23
24
26
28
29
30
32
33
34
36
38
41
43
45
47
49
50

b) Add together the circled responses responses from items:

2
3
4
5
15
22
25
27
31
35
37
39
40
42
44
46
48
51
52

c) Subtract the total of (a) from the total of (b).

The remainder is the attitude questionnaire score. The higher the score, the greater is the person's agreement with Voluntary Simplicity attitudes.

RATIONALE

It is clearly evident that as world energy and resource supplies diminish, the need to conserve and produce sufficient amounts of energy, necessary to sustain life for the future, becomes more imperative. The "future" encompasses that timespan that begins with those years immediately before us. Information from the Department of Energy indicates that reduction in energy use will help, but reduction is not enough. According to the July 16, 1979 Newsweek article on "Why We Must Act Now", at the present rate of consumption, America's oil and natural gas will be gone within a decade.

Not only are we faced with energy problems, but also the economic consequences, for as energy supplies dwindle, energy costs continue to multiply. It is impossible to escape the effect this will soon have on our lifestyles. We can choose to ignore the responsibilities this situation places on each one of us...or...turn our thinking around in a more creative and cooperative direction, challenging ourselves to find acceptable solutions to these complex energy, economic and lifestyle problems. Solutions to these problems may include recycling clothing, food or household items; conserving water, minerals and fossil fuels; producing food in a home garden, and cooperation among friends and neighbors in sharing skills, tools, time and human resources.

Developing sensitivities toward the world's energy and economic problems will help us voluntarily simplify our lifestyles. Hopefully, this will result in the growth of a self-controlled, self-reliant and conscientiously conservative public, dedicated to solving these problems on personal, local, national and worldwide levels.

ACTIVITY 1 Nine Dots *

Overall Objective	Activity Objective
Identify and discuss creative solutions to lifestyle problems related to energy, resources and economics.	Become aware of alternative solutions to the challenges of both our physical and social environments.

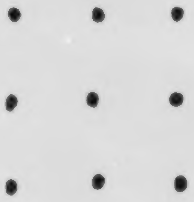
Background Information:

"Nine Dots" is an introductory activity that should be fun and challenging for starting things off in this unit. You might simply draw the pattern of nine dots on the blackboard and ask students to copy it down and try to solve the problem. After some of the students have solved it, be sure to make the point that the idea is for them to open their minds to new and creative solutions to world energy and ecology problems.

Directions:

There are many internal and external factors which hinder creativity. One of these factors is habit which limits people from looking at problems and situations with a creative, new approach.

Try the following: Without removing a pencil from the page, draw four straight lines connecting all nine dots and going through each dot only once.



Did you make any assumptions about how the problem had to be solved? Try it several times in many different ways.

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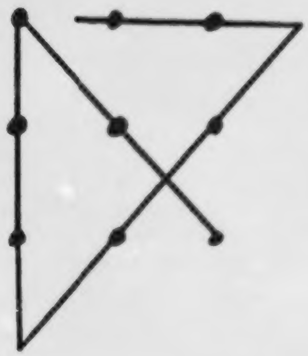
* Penney's Forum. "Creative Decision Making." Fall/Winter 1973. J.C. Penny Co., Inc.

ACTIVITY 1 Nine Dots

Solution to the "Nine Dots" Activity



ACTIVITY 2 What Information Are Your Storing?*

Overall Objective

Identify and discuss creative solutions to lifestyle problems related to energy, resources and economics.

Activity Objective

To demonstrate that people often know more than they think they know about a given subject.

Background Information:

The purpose of this activity is similar to that of Activity 1. Be sure the students understand the point, that they can find many creative solutions in their own minds.

Directions:

The mind is a storehouse of information gathered from experiences and observations, but much of the input is ignored and never drawn upon.

Do you think you can name 20 different kinds of flowers? Take three minutes to list as many as you can below.

* Penney's Forum. "Creative Decision Making. Fall/Winter 1973. J.C. Penney Co., Inc.

Activity 3 What is Voluntary Simplicity?

Overall Objective	Activity Objective
Define concept of Voluntary Simplicity	List some lifestyle practices that are examples of Voluntary Simplicity

Background Information:

Voluntary Simplicity is a lifestyle in which individuals and families choose to live more simply, considering the limited nature of the world's resources. This lifestyle would include recycling, home production of foods, conservation of nature and energy, and an emphasis upon the sharing of skills and companionship. Voluntary Simplicity is not a new concept; many individuals, particularly people who have lived through the Great Depression, have practiced Voluntary Simplicity in their own lives. Today, the dwindling supply of our natural resources, rather than a depression, is causing many individuals to re-evaluate their lifestyles and look for methods to reduce energy consumption, conserve natural resources, and generally live less extravagantly. Unfortunately many Americans are not aware of the changes they can make in their lifestyles that will result in the conservation of energy and resources. Voluntary Simplicity includes such practices as recycling materials, reducing energy consumption, learning to be a conscientious consumer, and swapping services with people. The purpose of this activity is to help students develop more voluntarily simple attitudes and skills.

Directions:

1. Write on the chalkboard:
   a) Necessity is the Mother of Invention
   b) Voluntary Simplicity

   Define Voluntary Simplicity (the teacher may want to xerox the background information about Voluntary Simplicity and distribute copies to the class).

   Ask the students the following questions:
   a) What does "Necessity Is the Mother of Invention" mean?
   b) How does the phrase, "Necessity is the Mother of Invention" relate to Voluntary Simplicity of Lifestyle? (people will practice Voluntary Simplicity when the need arises)
   c) What are some reasons to practice Voluntary Simplicity in one's style of living?
   d) Do you know anyone who practices Voluntary Simplicity? Who are they? What things do they do that you think are Voluntary Simplicity? Why do you think they practice Voluntary Simplicity?

2. On the chalkboard, write Voluntary Simplicity and not Voluntary Simplicity. Ask students to think of lifestyle practices that are and are not Voluntary Simplicity and why.

3. On the chalkboard, write Voluntary Simplicity and Not Voluntary Simplicity as a mixed list, rather than separately as shown here. Ask students to classify them and to add 3 more to each list which they believe belong there. Discuss why people do or do not carry out Voluntary Simplicity practices.

Voluntary Simplicity Practices

1. Carpooling
2. Gardening
3. Shopping lists
4. Using leftovers
5. Bringing your lunch
6. Recycling clothes, food, household goods
7. Returning bad merchandise
8. Using protein alternatives
9. Storing food properly
10. Using the clothesline
11. Swapping services with other people
12. Conserving energy on the job.

Not Voluntary Simplicity Practices

1. Buying groceries at the 7-11
2. Leaving lights on
3. Boiling one egg in a large pan
4. Using the oven to toast a slice of bread
5. Using the dryer to dry only one pair of jeans
6. Constantly opening the refrigerator
7. Boiling water in an open pan instead of a closed container
8. Using the oven to heat up the kitchen
9. Letting water run when brushing teeth
10. Throwing away used clothes
11. Throwing away used newspapers

4. Homework Assignment:

Ask the students to observe themselves and their family for one entire day. Have them make 3 lists of things that are not related to Voluntary Simplicity of Lifestyle which they do, their family does or their neighbors do. Ask each student to present the 3 lists to the class and suggest ways in which they and their family can reduce energy consumption, conserve natural resources, swap services with others and live less extravagantly. Have each student turn in their lists. At the end of the unit repeat this activity. Students can compare the lists to see if they and their family have started practicing Voluntary Simplicity and how their perception of Voluntary Simplicity has changed as a result of the unit.

Activity 4: Voluntary Simplicity Crossword Puzzle

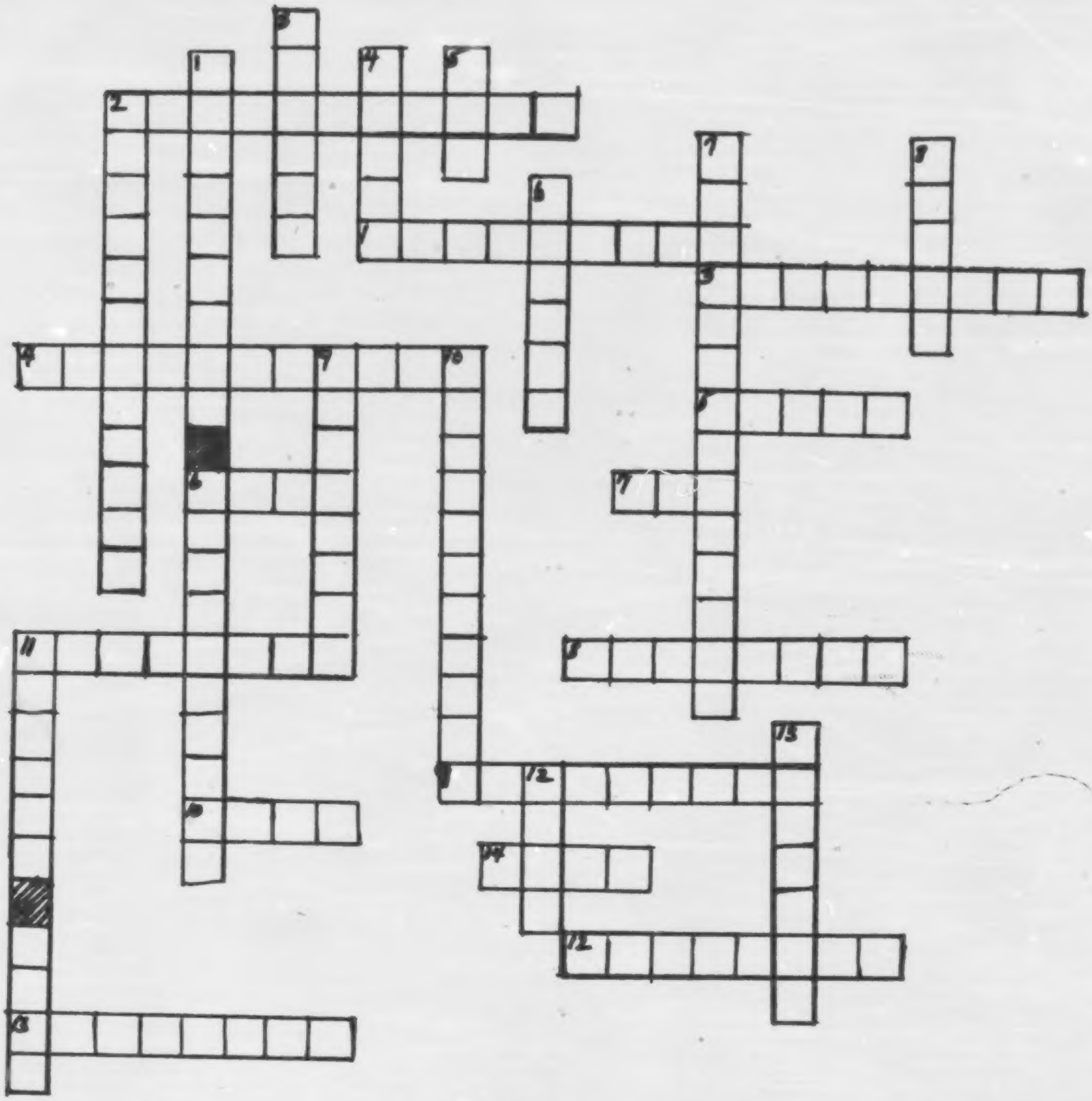
Overall Objective:

Define the concept of Voluntary Simplicity.

Activity Objective:

Define the terms associated with the meaning of Voluntary Simplicity of Lifestyle.

Directions: Read the definitions of terms associated with the concept of Voluntary Simplicity of Lifestyle located on the next page and fill in the crossword puzzle, placing terms in their correct locations.



Activity 4: Voluntary Simplicity Crossword Puzzle

Across:
1. a source or supply of something that is held in reserve; the estimated total quantity of something like minerals in the ground.
2. willingness to work or act together for a common purpose.
3. the contamination of air, water and natural resources, with unsafe, unclean and harmful elements.
4. all our surroundings which include persons, places, things, conditions and their influences.
5. to join with others or to receive in common with others the same amount.
6. to keep safe, to keep from being spent, consumed or wasted.
7. work done as part of the routine of one's occupation.
8. articles of dress; garments for the body.
9. a person's (or family's) preferred approach to living, including moral attitudes, preferred entertainment, living arrangements, style of dress and occupational choice.
10. the passing of hours, days, weeks, years, centuries, etc.
11. parents and children (in any combination) who form a household. (Plural word form).
12. any material that is woven, knitted, or knotted together; fabric.
13. pertains to the use of income, wealth, and items of use or value (like our natural resources).
14. a house, apartment or other place where we might live.

Down:
1. a lifestyle in which individuals choose to live more simply, in consideration of the limited nature of the world's resources and with concern for the quality of life. This includes recycling, home production of foods, conservation of nature and energy, and an emphasis on sharing companionship and skills.
2. the care or preservation of natural resources by wise use or management.
3. the capacity to do work; the power available to make something move.
4. H_2O, a transparent, odorless, tasteless liquid
5. a mixture of oxygen, nitrogen and other gases that surrounds the earth and forms its atmosphere.
6. time that is to be or come.
7. reliability or dependability in meeting obligations or appreciation of it.
8. to consume, spend or neglect something without adequate return, utilization or appreciation of it.
9. substances occurring in nature, some which are obtained by mining. (Plural word form).
10. pertains to the handing down of beliefs, customs, habits, ect., from one generation to another by mouth or by practice.
11. naturally occurring combustible matter such as petroleum, coal, and natural gas, formed from the remains of prehistoric organisms.
12. any nourishing substance eaten to sustain life, provide energy and promote growth.
13. to reuse, or extend the life of a manmade item or natural resource sometimes through modification or a newfound purpose.

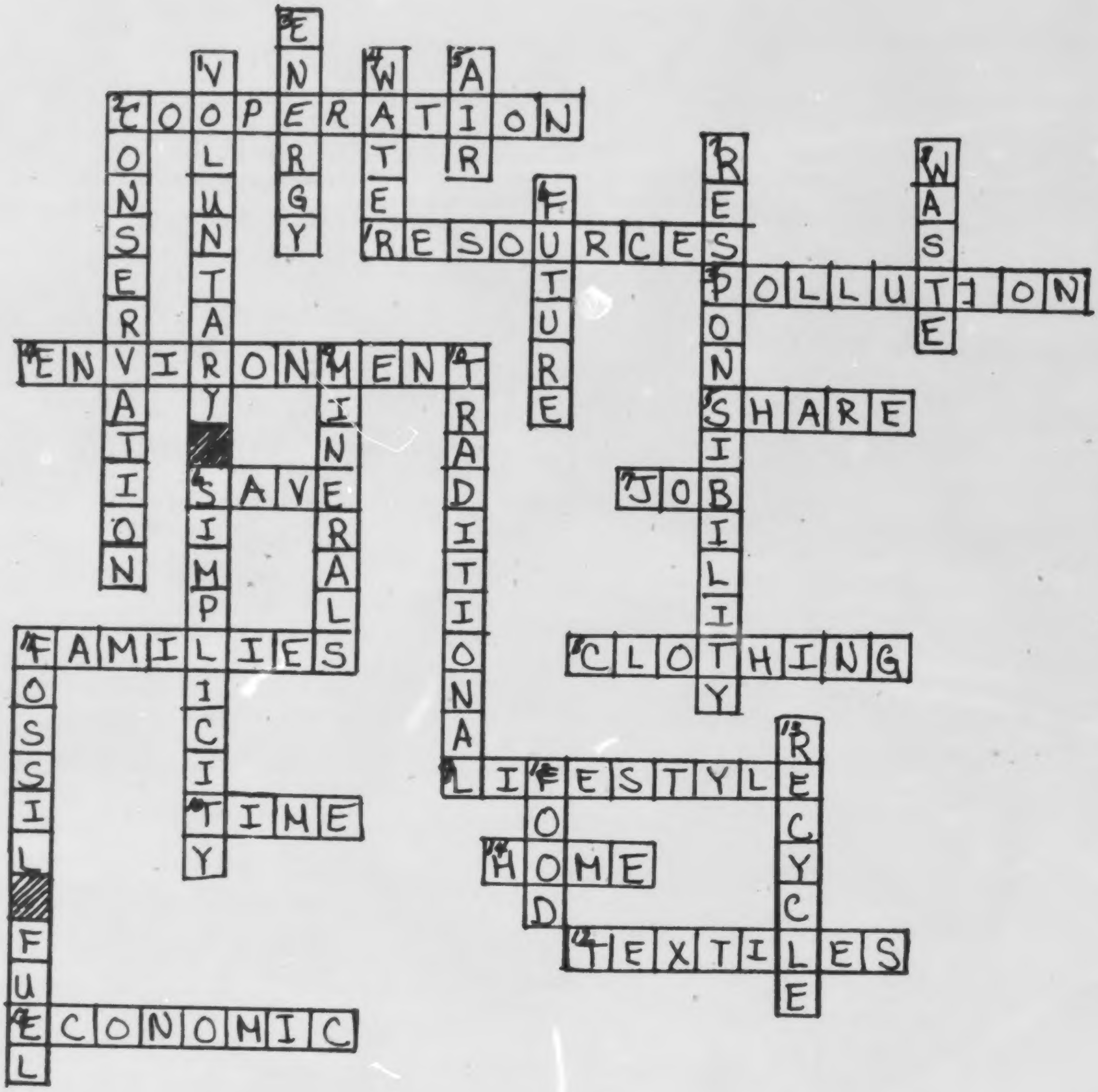
Activity 4: Voluntary Simplicity Crossword Puzzle Answer Sheet

Across:

1. resources
2. cooperation
3. pollution
4. environment
5. share
6. save
7. job
8. clothing
9. lifestyle
10. time
11. families
12. textiles
13. economics
14. home

Down:

1. Voluntary Simplicity
2. conservation
3. energy
4. water
5. air
6. future
7. responsibility
8. waste
9. minerals
10. traditional
11. fossil fuel
12. food
13. recycle


ENERGY
VOLUNTARY SIMPLICITY
WATER
AIR
COOPERATION
CONSERVATION
RESPONSIBILITY
WASTE
FUTURE
RESOURCES
POLLUTION
ENVIRONMENT
MINERALS
TRADITIONAL
SHARE
SAVE
JOB
FAMILIES
CLOTHING
FOSSIL FUEL
LIFESTYLE
RECYCLE
TIME
FOOD
HOME
TEXTILES
ECONOMIC

Supplementary Activities for What is Voluntary Simplicity

Activity 5 -- Films on Voluntary Simplicity

Show "Energy, A Matter of Choices". This is an excellent film which focuses on the shortage of electrical power, examines the social attitudes and technological forces which have led to the energy crisis and suggests alternatives which could overcome the crisis.

Time: 22 minutes
Cost: $290.00/purchase
$17.00/rental
Level: 7-12
Order From: Encyclopedia Britannica Ed. Corp.
425 N. Michigan Ave.
Chicago, IL 60611

"Toast" is an excellent film that examines the totality of energy flow from source to utilization, or waste in this case, of energy. Shows, as an example, the tremendous amount of energy necessary to grow, produce and distribute a piece of bread which ultimately ends up as burnt toast and is then discarded.

Time: 15 minutes
Producer: Earth Chronicles
Order From: Energy Information Center, State Energy Office (Florida) or from the Regional Energy Information Centers (addresses on next page).

"The Great Energy Freeze (Or Have We Stayed Too Long At the Fair" is a film about the recent cold winter of 1976, which strained energy production, utility companies, and almost every aspect of American life. This film askes the question, "Will it happen again, or will we do something about it?"

Time: 18 minutes
Producer: Screenscope, Inc., with cooperation of DOE
Order From: Energy Information Center, State Energy Office (Florida) or from the Regional Energy Information Centers (addresses on next page).

"Energy: Less is More" presents an investigation of the need for slowing the growth of energy consumption, and ways in which this can be done. Analyzes the contribution of "wasted" energy to the critical shortage of natural resources.

Time: 18 minutes
Producer: Churchill Films
Order From: Energy Information Center, State Energy Office (Florida) or from the Regional Energy Information Centers (addresses on next page).

"Energy, The Dilemma" surveys our increase in the use of energy, examines the supply of oil and gas, and considers alternate sources of energy. The dilemma is that we are trying to supply increasing amounts of energy from dwindling supplies in ways that are increasingly costly, hazardous and damaging.

Time: 20 minutes
Producer: Churchill Films in cooperation with the Environmental Quality Laboratory, Cal Tech.
Order From: Energy Information Center, State Energy Office
301 Bryant Building
Tallahassee, FL 32301

Regional Energy Information Centers

1. West Florida Regional Planning Council
   Post Office Box 486
   Pensacola, Florida 32593
   (904) 478-5870

2. Apalachee Regional Planning Council
   Post Office Box 428
   Blountstown, Florida 32424
   (904) 674-4461

3. North Central Florida Regional Planning Council
   2002 N.W. 13th Street, Suite 202
   Gainesville, Florida 32601
   (904) 376-3344

4. Northeast Florida Regional Planning Council
   8641 Baypine Road, Suite 9
   Jacksonville, Florida 32216
   (904) 737-7311

5. Withlacoochee Regional Planning Council
   Post Office Box 335
   Silver Springs, Florida 32688
   (904) 236-5132

6. East Central Regional Planning Council
   1011 Wymore Road, Suite 105
   Winter Park, Florida 32789
   (305) 645-3339

7. Central Florida Regional Planning Council
   Post Office Drawer 2089
   Bartow, Florida 33830
   (813) 533-4146

8. Tampa Bay Regional Planning Council
   9455 Koger Boulevard
   St. Petersburg, Florida 33702
   (813) 577-5151

9. Southwest Florida Regional Planning Council
2121 W. First Street
Fort Myers, Florida 33901
(813) 334-7382

10. Treasure Coast Regional Planning Council
Post Office Box 2395
Stuart, Florida 33494
(305) 286-3313

11. South Florida Regional Planning Council
1515 N.W. 167th Street, Suite 429
Miami, Florida 33169
(305) 621-5871

More Supplementary Activities for What is Voluntary Simplicity

Activity 6 -- What are Examples of Voluntary Simplicity?

During the next week, when you are reading the newspaper, watching television, or listening to the radio, look or listen for stories about individuals, groups, or businesses that are praticing or are not practicing Voluntary Simplicity of Lifestyle. Prepare to report your findings to the class.

Activity 7 -- When is it Possible/Desirable to Practice V.S.?

Go over the items in the Voluntary Simplicity Practices (Activity #3) that pertain to Voluntary Simplicity. Ask the students to decide when a person might find it possible or desirable to do them and when it would not be possible or desirable to do them.

Example:

Gardening: When would it be possible for your family to plant a garden? When not?

Carpooling: When would your family members carpool with a neighbor or friend? When not?

Activity 8 -- Student Reading Assignment on Voluntary Simplicity

Read the article, "Voluntary Simplicity of Lifestyle: Shaping the Future." Discuss both the ways in which people carry out this style of life and the reasons for doing so.

Activity 9 -- Interviews on Voluntary Simplicity

The class could prepare a questionnaire and each student would then interview two or three elderly persons on conservation practices they have used, especially during the depression, then share in class and discuss how these ideas might or might not be useful today. Emphasize their use of passive energy such as cooling the house by opening windows on two sides of the house or drying clothes on a clothes line.

Voluntary Simplicity of Lifestyle: Shaping the Future*

The growing awareness that humankind is rapidly using up the finite supplies of non-renewable natural resources is of increasing concern in today's world. In a recent energy message, the president of the United States indicated that without decisive steps toward energy conservation, the country would see radical changes in the American lifestyle within the next 20 years.[9] Like Americans, many other people of the world have taken for granted the expectation that they will be able to continue living in climate-controlled dwellings filled with electrical conveniences and ride in private vehicles to climate-controlled workplaces, also filled with electrical conveniences. The problem is that Mother Nature is about to pull the plug on this electrical-powered modern dream.

Harbingers of this imminent worldwide power failure have been evident for some years, in the skyrocketing price of gasoline, empty fuel-oil tanks in the dead of winter, and electrical blackouts on hot August nights. According to various United States Government reports, the world may have only a few decades of petroleum and natural gas left and possibly a few hundred years of coal supplies.[9]

Two other natural resources upon which the delicate balance of human existence is dependent -- pure air and water -- are threatened by pollutants produced by the dumping of various industrial and home wastes and the burning of fossil fuels. Although the causes of water and air pollution may be centered in industrialized nations, the problem is a global one, given the natural interchange of the world's water system and the world-wide flow of high-altitude air currents.

A final global issue to be noted here is that of the inequitable distribution of food supplies throughout the world -- specifically, the shortage of protein sources in many parts of the world. There appear to be at least half a billion people in the world today who are malnourished, over half of them children under five years of age.[1] This situation is particularly shameful in light of the fact that other peoples of the world are over-nourished and wasteful of food resources. In line with the co-existence of feast and famine in today's world is that fact that the world is closer to global famine now than it has been for decades, despite remarkable advances in food production over that last 25 years.[6] The situation is likely to become worse before it becomes better, in view of the projected increase in world population from four to seven billion by the year 2000.[7]

A final and most important point to be made is the interrelatedness of (1) global, national, local, and personal concerns, and (2) the present and the future. National concerns may be characterized by the threat to national security posed by the fact that Americans, comprising 5.4 percent of the world's population, consume 30 percent of the world's resources.[2] Local concerns are those such as depersonalized lifestyles in modern communities, and personal concerns are the lack of personal fulfillment and sense of being cut off, as described by Alvin Toffler in Future Shock.[8] Global concerns and global solutions cannot possibly be seen as separate from national, local, and personal concerns and solutions. Nor can the future be seen as separate from the present. What individuals do to solve or create current problems affects how the world deals with current and future problems. From this we may draw two conclusions. First, the ways that individuals choose to live their lives shape the way the world is. Second, the way that we live in the present will shape the future.

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*Christie, L. & Pestle, R. "Voluntary Simplicity of Lifestyle: Shaping the Future." Tips and Topics in Home Economics, Summer, 1981, 21.

One Solution: Voluntary Simplicity

While it would be naive to suppose that any one solution could effectively solve all the problems listed above, Voluntary Simplicity has a certain amount of appeal in that it does address all of the problems listed and in that it begins at the level of individual motivation. In undertaking to explain what Voluntary Simplicity is, perhaps it is useful to begin by stating what it is *not*. One thing Voluntary Simplicity is *not* is a *new* idea. People living today who experienced World War I or II and the Depression learned to live simply due to necessity, and many of those people still hold the same values and choose to utilize resources conservatively. Also, as early as 1936, the term "voluntary simplicity" was being used[5] with essentially the same concepts and values that it carries today. One other thing Voluntary Simplicity is *not* is a "back to nature" movement, as characterized by living in poverty or as a fad confined to our country.[3]

What Voluntary Simplicity *is* is a lifestyle. It is living in a way that is outwardly simple and inwardly rich and embraces "frugality of consumption, a strong sense of environment urgency, a desire to return to living and working environments which are of a more human scale, and an intention to realize our human potential -- both psychological and spiritual -- in community with others."[4] Emphasis is on material simplicity, recycling of used goods, use of renewable resources, sharing of goods and services with other people, and cooperation in discovering creative solutions to common problems.

Some examples of carrying out all the ideals just listed might be the following: using only those resources like water and food one needs, neither more nor less; re-using materials like glass, paper, and textiles wherever possible; using renewable resources like solar energy rather than nonrenewable ones like petroleum; and sharing the use of appliances like clothes dryers and lawn mowers with other families, rather than each family having its own complete set of appliances. In short, Voluntary Simplicity is the opposite of a consumeristic society in which many disposable items are produced for the sake of convenience.

An important point to be made is that Voluntary Simplicity is *not* limited to a single lifestyle, but may embody many different styles of living, applicable to people of different income levels. For example, several families may choose to live together, sharing living space and appliances and exchanging goods and services. But communal living is only one example of living Voluntary Simplicity. Another family may choose to live in a home which takes maximum advantage of solar energy. Still another may lead a traditional lifestyle but give special attention to conserving all resources and re-using materials wherever possible. All of these lifestyles are examples of practicing Voluntary Simplicity.

1. Barnet, R. J. "A Reporter at Large: The World's Resources, Part II." *The New Yorker*, March 31, 1980, 40.

2. Center for Science in the Public Interest. *99 Ways to a Simple Lifestyle*. Garden City, New York: Anchor Books, 1977, xi.

3. Cornille, T.A., Oransky, K.S., and Pestle, R. "Changing Family Lifestyles: Adapting to the Energy Crisis." *Journal of Home Economics*, Winter, 1979, 36-37.

4. Elgin, D.S. and Mitchell, A. "Voluntary Simplicity." *The Co-Evolution Quarterly*, Summer, 1977, 4-19.

5. Gregg, R.B. "Voluntary Simplicity." *The Visva-Bharati Quarterly*, August, 1936 .

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Activity 10 Getting to my Alternative Futures Before They Get to Me

Overall Objective

Identify some future goals, noting thoses which are compatible whith Voluntary Simplicity and propose some ways of reaching these Voluntary Simplicity related goals.

Activity Objective

Use their imagination to to think about their lives in the future.

Directions:

Have the students fill in the spaces about themselves, their home life, and their jobs, based on how they live now and how they think they might live in the future. The following questions may aid the students in coming up with ideas about the future.

1. What will I be doing 10 years from now, 20 years from now, and 30 years from now?
2. How old will I be 10 years from now, 20 years from now, and 30 years from now?
3. What kind of changes over the years do I expect to happen to me?
4. What are my plans for my job and home life in 1990, 2000, and 2010?
5. What will I have to do in each of the years to come in order for those plans to come true.
6. How will changes in resources affect my life in the years to come.

GETTING TO MY ALTERNATIVE FUTURES BEFORE THEY GET TO ME

	1980	1990	2000	2010	Notes
ME					
MY JOB					
MY HOME LIFE					

1980 -------------------Job and Home Life ---------------------2010

*Frances Zenor, 1976. Home Economics Supervisor, Pinnelas Co., Florida

Activity 11: Media

Overall Objective

Identify and discuss creative solutions to lifestyle problems related to energy, economics, and resources.

Identify the personal reward and value in making the choice to seriously practice simplifying ones lifestyle.

Activity Objective

Prepare media appropriate for informing others about problems involving energy, economics and resources.

Discuss ways that the students can have an effect on these problems. Explain how these activities make the students feel about themselves.

Directions: Students may work on either written reports, taped mock radio broadcasts, or posters devoted to informing others of the issues involved with:

1. air pollution
2. acid rain
3. oil spills in oceans
4. chemical dumps
5. endangered lands
6. nuclear waste
7. safe drinking water

Emphasis should be put on such aspects as:

Who benefits now from the policies? Who suffers now? How?

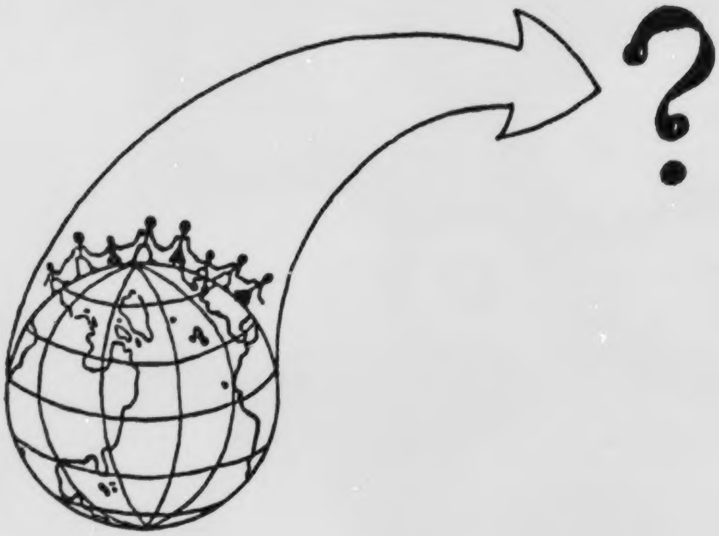
Who benefits in the future from the policies? Who suffers later on? How?

In what ways are people in one place dependent on the acts of others some place else?

What is meant by the phrase "We are our brothers' keepers?"

Magazine pictures of nice landscapes and clear rivers and lakes might be of use when dealing with these topics.

A panel of jurors from inside or outside the class could determine the best media presentation based on the areas of emphasis. The students should present their media work to the jurors, including a discussion on what they personally can do to help alleviate the issue and how they would feel if they did make such a contribution.



INTEGRATING VOLUNTARY SIMPLICITY OF LIFESTYLE INTO WAGE EARNING HOME ECONOMICS PROGRAMS

VOLUNTARY SIMPLICITY

IN

WAGE EARNING HOME ECONOMICS PROGRAMS

OVERALL AND ACTIVITY OBJECTIVES

Upon completion of this unit, participants will be able to:

OVERALL OBJECTIVES	ACTIVITY OBJECTIVES	ACTIVITY
1) Define the concept Voluntary Simplicity		
	1a) List some lifestyle practices that are examples of Voluntary Simplicity	3
	1b) Define and discuss the concept Environmental Conscience	12
	1c) Define the terms associated with the meaning of Voluntary Simplicity	4
2) Identify some of his/her goals, noting those which are compatible with Voluntary Simplicity, and propose some ways of reaching those goals.		
	2a) Use their imagination to think about their lives in the future	10
	2b) Outline the ways in which environmental conscience can effect job selection and job performance.	12
	2c) List at least five ways in which performing a given job can effect the environment.	12
	2d) Identify some of his/her occupational goals by talking with people in the community about the kinds of jobs they do	15
	2e) List at least three ways in which the energy shortage can effect people's jobs	22

OVERALL OBJECTIVES	ACTIVITY OBJECTIVES	ACTIVITY
	2f) List at least three things a worker can do to conserve energy on the job	23
3) List reasons why it is necessary to practice conservation attitudes about energy and resources as they effect each person's lifestyle.		
	3a) Describe how jobs that exist today may change in the future due to shortages of natural resources.	16
	3b) Discuss ways in which male and female roles influence the kinds of jobs men and women get	20
	3c) Explain how changing male and female roles may effect jobs in the future	20
	3d) Define the term role and list which parent performs which tasks in his/her family.	21
	3e) Define and give examples of sex role stereotyping.	22
	3f) Explain why female and male roles developed.	22
4) Discuss the energy, resource, and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.		
	4a) Take some of the Voluntary Simplicity ideas home to discuss with their families	19
5) Identify the personal reward and value in making the choice to seriously practice simplifying one's lifestyle.		
	5a) Discuss ways that the students can have an effect on these problems. Explain how these activities make the students feel about themselves.	11

OVERALL OBJECTIVES	ACTIVITY OBJECTIVES	ACTIVITY
	5b) Discuss the personal satisfaction of refusing to tolerate sex discrimination. . .	20
6) Identify and discuss creative solutions to lifestyle problems related to energy, economics, and resources.		
	6a) Become aware of alternative solutions to the challenges of both our physical and social environments.	1
	6b) To demonstrate that people often know more than they think they know about a given subject.	2
	6c) Prepare media appropriate for informing others about problems involving energy, economics, and resources	11
	6d) Identify and describe at least five new occupations which may emerge during the next 15 years.	13
	6e) Describe how jobs that exist today may change in the future due to shortages of natural resources	14
	6f) Identify and discuss the following alternatives to the traditional 40-hour work week, in terms of different types of families i) job sharing ii) flexi-time iii) part-time jobs with benefits.	17, 18

Integrating Voluntary Simplicity Into Wage Earning Home Economics Programs in THE NEW CURRICULUM FRAMEWORK FOR HOME ECONOMICS IN FLORIDA.

The topics on the left are mentioned in the Home Economics Wage Earning Home Economics Programs unit on Voluntary Simplicity. Corresponding number and letter notations, on the right, suggest the morst appropriate place the topic will fit into the outlined courses presented in The New Curriculum Framework for Home Economics In Florida.

Topic	Part	Page	Concept No.
Assessment of Personal Interest, Abilities, and Attitudes	I	4	2A
Types of Careers	I	4	2B
Sources	I	4	2C
Multiple Roles of Homemakers	I	4	3B
Changing Roles	I	26	2C

GLOSSARY

To the Teacher: The glossary is provided for two purposes. First, you can use it as a preliminary learning activity in itself, to familiarize yourself and your class with relevant terminology before starting the unit. Second, you can use it as a ready reference for vocabulary terms encountered in the unit background information and activities. In either case, copies can be xeroxed for student use.

Active Solar Energy: use of the energy of the sun which requires electrical power to operate pumps or fans to move and store air or water which has been heated by the sun.

Conservation: the care or preservation of natural resources by wise use or management.

Electrical Usage Peaks: periods of time during which the power company must increase its production of electricity to meet heavy demand from customers.

Energy: the capacity to do work; the power available to make something move.

Environmental Conscience: an approach to life in which concern for the environment is an important part of all decisions.

Flexi-time: a working arrangement in which a person works 40 hours per week, but is free to work any 40 hours, even outside the traditional 8 to 5 workday.

Fossil Fuels: naturally occurring fuels such as petroleum, coal, and natural gas, formed from the remains of prehistoric organisms.

Job Sharing: a working arrangement in which an employer hires two or more workers to share a single full-time job.

Lifestyle: a person's (or family's) preferred approach to living, including moral attitudes, preferred entertainment, living arrangements, style of dress and occupational choice.

Non-renewable Resources: natural products like petroleum, coal and other fossil fuels which take a very long time for nature to form and which, once used up, cannot be replaced.

Passive Solar Energy: use of the energy of the sun without mechanical devices; an example is a regular window which is placed in such a way as to let in natural breezes in summer and the heat of the sun in winter.

Resource: a source or supply of something that is held in reserve; the estimated total quantity of something like minerals in the ground.

Role: the customary way a person is expected to act; a set of tasks or activities a person usually performs.

Sex Role Stereotype: a set idea of how males and females are supposed to act and behave simply because of their sex; an example is the expectation that wives are supposed to take care of the children and husbands are supposed to work.

Solar Energy: that energy which directly results from the heat or light produced by the sun's rays.

Traditional Lifestyle: one's preferred approach to living which is based on the way most people have chosen to live in the past.

Voluntary Simplicity: a lifestyle in which individuals choose to live more simply, in consideration of the limited nature of the world's resources and with concern for the quality of life. This includes recycling, home production of foods, conservation of nature and energy, and an emphasis on sharing companionship and skills.

ACTIVITY 12 Environmental Conscience

Overall Objective

Define the concept of Voluntary Simplicity.

Identify some of his/her goals, noting those which are compatible with Voluntary Simplicity and propose some ways of reaching these goals.

Activity Objectives

Define and discuss the concept Environmental Conscience.

Outline the ways in which environmental conscience can affect job selection and job performance.

List at least 5 ways in which performing a given job can affect the environment.

Background Information: Activity 12 is very important in establishing the connection in students' minds between the jobs they select and their ecological responsibilities. Sometimes it is easy for employees to simply perform their jobs with no thought as to responsibility for any environmental damage they may do. One of the purposes of this activity is to encourage students to select occupations with environmental considerations in mind.

In order to do this, they are asked to list ways in which their jobs might effect the environment. Several job descriptions are included to help them with this task. It might be useful if you were to discuss the job descriptions with them beforehand, or augment them with additional information, readings, or films. Another possibility would be for you to substitute other occupations in which you think your class would have some interest. In any case, an essential point for you to stress is the attitude that each worker has a responsibility for protecting the environment in the selection and performance of his or her job.

Directions:

People can improve or damage the world's environment by the products they consume and the ways in which they dispose of waste materials. In much the same way, people can improve or damage the environment by the jobs they do. For example, a person who works at a factory which dumps chemical wastes into a river is damaging the environment by performing his or her job. On the other hand, a person who works at a plant which recycles waste paper is improving the environment and conserving resources.

One way people can avoid damaging the environment by the work they do is by developing an "environmental conscience" in selecting the kind of job they will do for their life's work. To practice thinking about the environment in choosing an occupation, do the following activity.

Directions:

Read these three job descriptions, and then answer the questions that follow.

Occupation #1: Nuclear waste disposal engineer
Job includes finding sites for disposing of radioactive waste products from nuclear power generating plants, designing safe disposal tanks, and maintaining permanent security at sites.

Occupation #2: Paper recycling plant production worker.
Job includes using chemicals and operating machinery used in recycling old newspapers and boxes into new cardboard containers.

Occupation #3: Bus driver.
Job includes driving city bus, knowing layout of city and surrounding areas and giving route information to passengers.

1) If I were performing this job, how would I use up resources which can't be replaced?

Occupation #1:

Occupation #2:

Occupation #3:

2) In performing this job, how could I conserve resources which can't be replaced?

Occupation #1:

Occupation #2:

Occupation #3:

3) How would my performance of this job damage the environment (local, national, world)?

Occupation #1:

Occupation #2:

Occupation #3:

4) How would my performance of this job improve the environment?

Occupation #1:

Occupation #2:

Occupation #3:

5) How would my performance of this job help or hurt people in other nations?

Occupation #1:

Occupation #2:

Occupation #3:

6) How would my performance of this job help or hurt people in future generations?

Occupation #1:

Occupation #2:

Occupation #3:

ACTIVITY 13 HELP WANTED - 1995

Overall Objective	Activity Objective
Identify and discuss creative solutions to lifestyle problems related to energy, economics, and resources.	Identify and describe at least 5 new occupations which may emerge during the next 15 years.

Background Information: Activity 13 asks students to use their imaginations in describing what they think might be some new occupations which may emerge in the future. Since they have little background information for doing this, they may become frustrated if they do not understand that there are no requirements for this activity except that they get in touch with what the job market may be like at some future point in their occupational life. Your role will be to simply encourage them to fantasize and let their imaginations go.

For ideas on what a HELP WANTED column looks like, you may have them each bring in a newspaper classified ad section to class. One of the goals of this activity is to have fun (imagining what their future may be like), so asking students to share their future ideas in class may contribute to this goal.

For example: (1995 HELP WANTED ad)

WANTED: Energy efficiency consultant to staff neighborhood energy management office. Must have degree in solar engineering and be familiar with the latest wind-powered electricity-generating equipment. Duties include home visits, consultation in office and holding neighborhood meetings in which solar and wind-powered appliances are demonstrated. Salary negotiable.

Directions:

Write a HELP WANTED column dated June 17, 1995. Include at least five items with job descriptions and requirements; make up new occupations.

ACTIVITY 14 My Job In the Future

Overall Objective

Identify and discuss creative solutions to lifestyle problems related to energy, economics, and resources.

Activity Objective

Describe how jobs that exist today may change in the future due to shortages of natural resources.

Background Information Activity 14 can be used in conjunction with 13 or as an alternative to it. Its purpose is to get the students to think about occupations and how they may be different in the future. For example, some jobs may disappear althogether due to a lack of inexpensive electricity and fossil fuels, and other new jobs may be developed due to the discovery of new energy sources like the motion generated by wave action in the ocean. You can ask students to bring in classified sections from the newspapers, or you may want to bring some in yourself. As students look at each job, ask them to think about whether or not that job might still exist 15 years from now. If so, how might it be different, and why?

Role playing in small groups may be a good way for students to share and enlarge upon their ideas. Before dividing the students into groups, talk over the following instruction with them so that they all start out going in the same direction.

One student in each group will play the part of a person interviewing for a job the group has selected from the newspaper WANT ADS. The rest of the group are staff members who will select the new employee. The interviewee should ask the staff:

1) how is their industry dependent on conventional power sources?
2) how is the shortage of fossil fuels effecting their industry?
3) how is the job likely to change in the next 10-15 years due to shortages of natural resources?
4) how will the job change in the future to accommodate alternative power sources like the wind and solar energy?

Once the students understand their task, they can divide into groups and begin the activity.

Directions:

Bring in a classified ad section from your newspaper. Look over the jobs advertised in the HELP WANTED columns and see if you think each job will still be available in 1995: Do you think the job will be different then from what it is now? Why or why not? Think in terms of existing energy sources like petroleum and of future sources like solar energy. Within the next 15 years petroleum is likely to become very scarce and solar energy is likely to come into much wider use. Suggest why some jobs may disappear or change due to scarcities of fossil fuels and inexpensive electricity.

After you have had time to think over the questions listed above, divide the class into small groups of 4-5 students each and role play a job interview according to your teacher's instructions.

ACTIVITY 15 ASK THE PEOPLE WHO KNOW

Overall Objective

Identify some of his/her goals, noting those which are compatible with Voluntary Simplicity and propose some ways of reaching these goals.

Activity Objective

Identify some of his/her occupational goals by talking with people in the community about the kinds of jobs they do.

Background Information: This activity is a good opportunity for students to think about their own occupational goals by getting some input from community members who work at various jobs. You may know some people yourself who could talk with your class about their jobs, or students can invite parents or neighbors to come to class. In the class discussion during and after the guest's visit, be sure to have students list some of their own occupational goals and talk about whether their goals are compatible with Voluntary Simplicity.

Directions:

In your community there are workers in many kinds of jobs, and people usually like to talk about their jobs. So why not contact some workers in an occupation in which you have some interest and ask them to come in and talk with your class? Ask them what a workday is like for them, what it was like several years ago, and what they think it might be like in the future.

During and after your guest's visit, think about your own goals and write down as many as you can. Then talk with your classmates about your goals and whether or not they are compatible with the ideals of Voluntary Simplicity. Ask yourself and your classmates questions like: What effect will performing my job have on the environment, people living near my work place, people living in the United States, people in other countries, and people in future generations?

For Example: A person who works as an engineer at a nuclear power generating plant may do some damage to the environment and to people living near the plant if the equipment is not safe and a nuclear accident occurs. The persons work may affect people living in the United States if the plant's operation influences whether or not nuclear power plants become a common source of electricity in this country. People in other countries may be affected by our using up resources like iron ore to build nuclear plants and uranium to fuel them. And finally, the persons working at a nuclear plant will affect future generations by adding to the deposits of toxic nuclear wastes that will have to be carefully stored and guarded for hundreds of years to come.

ACTIVITY 16 "FUTURIZING" OCCUPATIONS

Overall Objective

List reasons why it is necessary to practice conservation attitudes about energy and resources as they effect each person's lifestyle.

Activity Objective

Describe how jobs that exist today may change in the future due to shortages of natural resources.

Background Information: Activity 16 is intended to encourage students to start thinking about occupations in terms of the future and changes that may occur due to shortages of natural resources. You may want to add certain occupations to the list provided, or even write your own list of occupations which you think may fit your class better. The activity could be done during class time or for homework. The process of thinking about jobs and the future could be carried even a few steps further by having students share their ideas in class after they complete the written part of this activity.

Directions:

Look at the following list of occupations and circle two in which you have some interest:

-appliance repair person
-high school teacher
-homemaker
-farmer
-architect
-secretary
-electrician
-physician
-bankteller
-home economist
-recycling engineer
-pre-school teacher
-travel agent
-health care specialist
-city planner
-nutritionist

Write a paragraph or two on what you think each of those occupations includes. In other words what do you think a workday is like for a worker in each of the jobs you choose?

For Example:
Occupation: Secretary

Present tasks: Answers telephone, takes messages, attends meetings and takes notes, sorts incoming mail, coordinates the staff's schedules, types correspondence and other materials, does office bookkeeping.

Occupation #1: ______________________________
Present Tasks:

Occupation #2: ______________________________
Present Tasks:

Now think about a worker in each of those occupations 10 years from now. How do you think his or her workday may be different then? Write a paragraph or two on each job again, thinking about the future. Consider the fact that fuels like petroleum are likely to be in very short supply and very costly 10 years from now. Inexpensive electricity may not be readily available. Jobs which depend upon the use of electricity may have to be changed to use more simple, natural power sources like human energy or energy from water, wind, or the sun.

For Example:

Occupation: Secretary

Future Tasks: Coordinate video-phone communications, check all lights and electrical appliances to minimize use of electricity, make sure the solar panels are clean and aimed properly, update staff's schedule in central computer, and coordinate the offices' shared transportation schedule.

Occupation #1: ______________________________

Future Tasks:

Occupation #2: ______________________________

Future Tasks:

Activity 17 Changing the 40-Hour Work Week

Overall Objective

Identify and discuss creative solutions to lifestyle problems related to energy, economics, and resources.

Activity Objective

Identify and discuss the following alternatives to the traditional 40-hour work week, in terms of different types of families:

- i) job sharing
- ii) flexi-time
- iii) part-time jobs with benefits

Background Information: One of the overall objectives of Voluntary Simplicity is for participants to discover creative solutions to lifestyle problems. Activity 11 suggests some alternative approaches to traditional working arrangements, as possible solutions to some energy problems that are aggravated by the traditional 40-hour, eight-to-five work week. It is suggested that the background information be duplicated and placed in the students' hands and then reviewed with them by you. In that way, they can become familiar with what the problems are and what the proposed solutions are.

Once you feel that the class has an adequate grasp of the background material, then they are ready to proceed with the activity. Role playing is suggested as a way for students to approach the problems and the solutions creatively. That is, if they can experience what it feels like to live in various kinds of families, they can gain more of an appreciation for what the problems are and how to solve them creatively. You can ask for volunteers to role play each of three kinds of families for the class. For single-parent families you might have students take the parts of one parent and an adolescent and a younger child. For two-parent families you could have 2 parents and any number of children - possibly a large and a small family. And, of course, you would need only two parents for a family with no children.

After the several groups of students who represent a type of family role play that family type, the whole class can discuss the similarities and the differences which occurred in the combined portrayals. Be sure to ask the class to think about any other creative solutions to the problems mentioned, other than job-sharing, flexi-time, and part-time jobs.

Directions:

Ask for volunteers from the class to role-play family members from each of the following types of families:

1) single-parent families
2) families with 2 parents present and children
3) families with no children

Then the three "families" can sit in a circle and discuss how the problems above are affecting them and how the proposed solutions might help solve their problems. After the discussion, other class members can add their own ideas. See how many creative solutions (besides job-sharing, flexi-time, and part-time jobs) the class can think of to solve the problems just discussed.

BACKGROUND INFORMATION

Traditionally, workers are hired to fill a job position and are expected to be at work doing their job 40 hours per week, usually from 8 a.m. to 5 p.m. on week days. While this is the way most people work, there are some problems with it.

First, if both the husband and wife in a family are employed, they usually have to go to different places to work, and it becomes convenient to have two cars.

Second, the 8 to 5 workday causes two other problems: electrical usage "peaks" and morning and afternoon "rush hours". The electrical usage peaks are caused by so many people getting up for work at the same time of the morning and using lights, hot water, stoves, toasters, hair dryers, microwave ovens, etc. These peak usage times cause inefficiencies in the production of electricity at the power company and use up more fossil fuels, making electricity more costly for everyone. The same thing happens again at night, when everyone gets home from work and turns on air conditioners, ovens, radios, and televisions.

The traffic rush hours cause a different kind of problem. With so many cars crowding the streets and highways all at once, the amount of air pollution put into the environment is very high at those times. Also, automobile engines are very inefficient in stop-and-go traffic and use more gas. This is not even to mention the noise pollution and the irritation of having to drive to work in heavy traffic.

Third, in families with children, if both parents are employed, they need to find child care for the children, which will cost them a part of the income they earn.

Fourth, in families where the husband or the wife would like to work only part-time, they will find that most part-time jobs pay no benefits. This means that part-time workers get no sickdays, no medical insurance, and no vacation.

Some Alternatives

Job Sharing

In some cases, employers will hire two workers to share one full-time position. For example, a husband and wife who are both teachers might get one teaching job and each work half-time at it. The one who is not working can stay at home with the children or just enjoy the leisure time.

Flexi-time

This is an arrangement in which a person works 40 hours per week, but is free to work any 40 hours he or she chooses. So, if the worker wants to work 10 hours per day, Monday through Thursday and then take Friday off, he/she is free to do so. And if the worker wants to begin work at 6:00 a.m. each day and leave at 2:00 each afternoon, that is alright too. This would help electrical peak and rush hour problems listed above, and would also help with child care, since parents could have more day time hours with their children.

Part-time Jobs with Benefits

If workers could get partial benefits for part-time jobs, many people might choose to work only part-time. This could help solve all the problems above. For example, if a husband worked mornings and a wife worked afternoons, they could share one car and also avoid child care costs altogether. There would always be one parent at home with the children.

Activity 18 Ask Employers about Changing the 40-Hour Work Week

Overall Objective

Identify and discuss creative solutions to lifestyle problems related to energy, economics, and resources.

Activity Objective

Identify and discuss the following alternatives to the traditional 40-hour work week, in terms of different types of families:

- i) job sharing
- ii) flexi-time
- iii) part-time jobs with benefits

Background Information: The purpose of this activity is to help students expand their understanding of job-sharing, flexi-time, and part-time jobs with benefits. In order for this to happen, you will need to find a local employer who uses one or more of these alternative working arrangements. You might assign some students to call several local businesses to help you to locate a speaker.

Before the visit, spend some time with your class listing questions to ask the representative. Some of these might be questions like:

1) Why did your company start offering job sharing (or flexi-time, or part-time) working arrangements?
2) What effects does job sharing (or flexi-time, or part-time work) have on the company?
3) What effects does it have on the employees?

Directions:

Invite a representative of a local employer to come to your school and talk with your class about job-sharing, part-time work, and flexi-time. The representative may know some workers who share a job or work part-time or flexible hours. If so, could the workers come in to talk with your class? Before the visit, prepare some questions you would like to ask the representative or worker.

Activity 19 Your Family and Changing the 40-Hour Work Week

Overall Objective

Discuss the energy, resource, and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.

Activity Objective

Take some of the Voluntary Simplicity ideas and activities home to discuss with their families.

Background Information: Activity 13 is one of the activities in this unit that is intended to help students learn voluntary simplicity concepts themselves and take them home to their families at the same time. This activity will probably work best after you have spent some class time on job-sharing, flexi-time, and part-time jobs with benefits, so that the students have an adequate understanding of them. Then they will be ready to take the ideas home and ask their parents and brothers and sisters if they have ever used such working arrangements and what the advantages and disadvantages are. (See activity for specific questions).

During class time after the students have done this activity with their parents, use the input from their families as material for a class debate. One team can represent the advantages of alternate working arrangements, and the other can represent the disadvantages. This experience chould give students a good, realistic picture of both sides of the issue.

Directions:

Spend some time talking with your family about job sharing, flexi-time, and part-time jobs. Have your parents or brothers or sisters ever tried any of those alternative ways of working? Would they like to? What would be the advantages and disadvantages of each of the alternatives for your family?

After talking with your family, write down a few ideas from your talk so you can discuss them in class.

Activity 20: Men, Women, and Work

Overall Objective	Activity Objective
List reasons why it is necessary to practice conservation attitudes about energy and resources as they effect each person's lifestyle.	Discuss ways in which male and female roles influence the kinds of jobs men and women get. Explain how changing male and female roles may effect jobs in the future.
Identify the personal reward and value in making the choice to seriously practice simplifying one's lifestyle.	Discuss the personal satisfaction of refusing to tolerate sex discrimination.

Background Information: There are a number of purposes for this activity. One purpose is to help students become aware of sex discrimination in employment and of how it is inefficient as well as unfair. Another purpose is to help students realize that the main reason for sex segregation in occupations is not that women can't do traditionally "male" jobs, but simply that men have usually filled those jobs. This situation can change in the future.

The final purpose of this activity is to encourage students to think about all jobs as available to both men and women. The activities included here are designed with this purpose in mind. For the first part, you might split the class into four groups and have each discuss one of the four job descriptions and report their conclusions to the whole class. For the debate, you might act as a moderator, and for the job interview role playing, you can act as a facilitator by helping the class act out a job interview. Emphasize getting the students to think and express how they feel about sex discrimination and the benefits for themselves and society if they refused to accept sex discrimination.

SUGGESTED RESOURCES:

Film: "The Quiet Revolution of Mrs. Harris"

Film: "Changing Images: Confronting Career Stereotypes"

BACKGROUND INFORMATION

In the past a very important consideration in job selection was the fact of being a male or a female. There were certain jobs that were only for men and others that were only for women. Until very recently (until federal law made it illegal) newspaper HELP WANTED columns specified whether a job was open to men or to women.

Today the law has changed things so that any job is supposed to be open to both men and women. But in reality, many jobs are very difficult for women to get and some very difficult for men to get. And overall, the jobs usually done by women pay a much lower salary than those usually done by men. In 1977, women who worked full time earned only 59¢ for each $1.00 earned by men who worked full time.

This income inequality has some effects on the lifestyles families can have. For example, if a family chooses to have the wife be the one to earn the family income and the husband stay at home, the family may have to decide to accept a lower income than many other families, since women generally earn less money than men. So even though the husband may be better at taking care of the children than his wife, and may want to spend some of his time, for example, growing fruits and vegetables, he may have to work in order for the family to have enough income.

Another problem caused by the tradition of having certain jobs that are usually done by women and others by men is inefficiency. You may have heard the saying "the best man for the job may be a woman." In many cases a man is hired to do a job just because that job is usually done by men, even though there may be a woman applicant who could do the job better. If the best person for the job were hired, regardless of being a man or a woman, the job could be done more efficiently, with less waste of resources.

Directions:

1) Read the following job descriptions. Then discuss whether or not you think each job could be performed by both women and men.

United Parcel Service (UPS) delivery person. Drives truck on assigned route, handles and delivers packages of up to 50 lbs. Responsible for keeping accurate records and maintaining good customer relations.

Health Care Worker. Responsible for checking in patients at the emergency walk-in clinic. Performs first aid and prepares typewritten intake papers for patients.

Child Care Specialist. Trains class of ten 3-year-old children in play and social skills. Must have some training in child development, physical education, and early childhood education.

Solar technician. Designs and installs solar heating and cooling systems in private homes. Must have training in plumbing and electrical wiring.

Activity 21: What is a Role?

Overall Objective

List reasons why it is necessary to practice conservation attitudes about energy and resources as they effect each person's lifestyle.

Activity Objective

Define the term role and list which parent performs which tasks in his/her family.

Background Information: This activity will help students understand what roles are and how they are divided in their families. After going over the background material with the class, you can facilitate the activity by having students raise their hand to indicate who does what task in their homes. You can ask for a volunteer to list the tasks on the blackboard and write down the number of students who say that mother, father, or both do each task.

After all the numbers are listed you can lead a class discussion about how tasks are assigned in different homes. Ask:

"How does it work out when parents share tasks instead of one or the other doing each task separately?"

"How is it different in families in which both parents work from families in which one parent works?"

Answers to these questions whould provide interesting material for students to take home and discuss with their families.

BACKGROUND INFORMATION

A role refers to the ways people act with each other and the kinds of tasks they expect and are expected to perform. In talking about male and female roles, for example, it is expected that women in families will usually do the child care and housekeeping tasks and that men will take care of earning the family income. You might be a little surprised to see a family in which father stayed at home to clean and cook and take care of the children, and mother went to work.

This is what the women's movement is all about. Women are saying that they want to be able to have rewarding careers and get some help on housekeeping and child care from their husbands. But these roles, or people's expectations of the kinds of things that men and women should do, are very slow to change. That is why very few families choose to have the mother work and the father stay at home with the children, even though fathers are very capable of caring for the children. It will simply take some time before such practices become common.

Directions:

Take a survey of your class, writing down the number of classmates whose mothers, fathers, or both are in charge of the following tasks:

	MOTHER	FATHER	BOTH
cooking			
earning income			
shopping for food			
child care			
cleaning			
paying bills			
attend PTA meetings			
yard work			
household repairs			
washing dishes			

Activity 22: Why are there separate female and male roles?

Overall Objective

List reasons why it is necessary to practice conservation attitudes about energy and resources as they effect each person's lifestyle

Activity Objectives

Define and give examples of sex role stereotyping.

Explain why male and female roles developed.

Background Information: Since there is a rather large amount of background information in this activity, you may want to assign it as homework the day before you plan to use the activity and then go over it in class the next day to be certain the students understand it. The activity is presented as a small-group discussion, but it could just as well be used as debate material. For a lively debate, you might have the class select one female team and one male team to discuss their thoughts about some of the sex stereotypes they list.

SUGGESTED RESOURCES:

Film: "The Re-education of Women and Men"

Other Materials: "Focus on the Future" - Women's Educational Equity Program

BACKGROUND INFORMATION

Millions of years ago, when early humans began to settle in one place and rely on farming for a major part of their food supply, they found it necessary for some of them to stay and tend the crops while others went off on hunting and gathering journeys. Since the women had to bear and raise babies, it was more practical for them to stay with the crops and children while the men went hunting. So, from the very beginning of families, the specialized jobs men and women did were determined by the fact that women were the ones to bear the children.

This division of labor continued down through human history and is still apparent today in that many families choose for the man to be the one to go to work and the woman to be the one to care for the children. Sometimes people carry these role specialties to the extreme, at which point they really believe that women can't do"men's" tasks and men can't do "women's" tasks. This is called Sex Role Stereotyping. An example is the belief that high school girls should be trained in home economics and boys in industrial arts. But just within the last 2 to 3 decades, things are beginning to change. One change is that --due to modern methods of contraception -- women can have control over when and if they will have babies. Second, with modern daycare facilities, women can go back to work very soon after having babies. Third, people are beginning to realize that fathers -- as well as mothers -- can do a very good job of caring for young children, and that women -- as well as men -- can provide for their families' money needs. So, it is possible for men and women to 1) not have children at all, 2) have father and mother both work, or 3) have mother go to work and father stay at home with the children.

Another reason for having roles is so that families don't have to make a decision on who is supposed to do what every time a task needs doing. For example, if a family had to sit down every time the grass needed mowing and decide who should do it, much time would be wasted. If it is understood by all that father will be responsible for taking care of the yard, then the family doesn't have to spend time and energy thinking about the lawn every time the grass gets long.

Still, there is no reason to think that women should do certain tasks and men other tasks just because they are women and men. Today some families are beginning to decide who will do what based on who wants to do it, or who does it best.

Directions: In groups of 4 students (preferably 2 males and 2 females) do the following:

1) Have each person write down 2 statements on a piece of paper, the first one beginning: "girls should..." and the second one beginning "boys should...".
2) Spend a few minutes thinking about where you learned those ideas.
3) Discuss your ideas with the group and decide if you believe they are true or not.

Activity 23 Discussion Questions

Overall Objective

Identify some of his/her goals, noting those which are compatible with Voluntary Simplicity and propose some ways of reaching these goals.

Activity Objectives

List at least 3 ways in which the energy shortage can effect people's jobs.

List at least 3 things a worker can do to conserve energy on the job.

Background Information: The questions listed here could be used in a variity of ways, depending on what you think would be effective with your class. For example, some of the questions might be used for large or small group discussions. Others might be assigned as one-page essays for students to write on their own. Still others could be assigned to small groups of students who, as a panel of "experts", could be asked to produce a list of recommendations for energy conservation on the job, for example. This is a chance for you to tailor-make activities for your class.

Directions:

1) In what ways might an energy shortage effect people's jobs?

2) What concerns would you have about the energy shortage if you were:

- planning your future career
- planning to retire soon
- considering looking for a new job
- managing your own business
- in charge of hiring new employees for your firm
- in charge of planning your company's budget

3) What are 5 things workers can do to conserve energy on the job?

Talk about workers in the following businesses:

- restaurants
- business offices
- construction companies
- service stations
- supermarkets

RESOURCE LISTING

1) Audio-Visual Materials

American Woman: New Opportunities
Butterick Publishing Company
Maclean Hunter Learning Resources
P.O. Box 4381, Grand Central Station   Grades 9-12
New York, New York 10017   1976 $49.00

Insightful presentation of current concerns and conflicts of women's role with emphasis on preparation for individual decisions regarding future options. Interesting format with appealing background music. Could be effective in classroom if balanced with similar program directed to males.
(2 Filmstrips, 2 Cassettes, 1 Teacher's Guide)

Changing Images: Confronting Career Stereotypes
University of California, Extension Media Center
2223 Fulton Street
Berkeley, CA 94720   1975
(1 Film)

Careers Tomorrow
William Abbott

The University without Walls
John Picarelli
World Future Society
4916 St. Elmo Ave.   T-7704 $6.00
Washington D.C. 20014

This set of tape cassettes explores the shift toward multiple careers and describes an approach to education that not only educates but also prepares for career changes.

Help-Wanted: Sexism in Career Education Materials
Women on Words and Images
P.O. Box 2163
Princeton, NY 08540   1976
(1 Carousel Cartridge, 1 Tape)

Lifestyles: Options for Living (Independent Living Series)
Maclean Hunter Learning Resources
P.O. Box 4381, Grand Central Station   Grades 11-12
New York, New York 10017   1976 $85.00
Part I: *What is a Lifestyle?*
Part II: *Values, Goals, Decisions*
Part III: *Making Changes*
Part IV: *Decisions in Action*

Challenges the viewer to imagine the future in terms of prescribed characteristics. Recognition of personal values is depicted as a critical factor in the process. Defines lifestyles in a flexible manner and gives examples. Stimulates thinking on values and future options. Presents a series of scenarios depicting people in life changes. Overview of change in American culture from past to present. Some emphasis on changing rules regarding male/female roles in society. Middle class orientation. Student spirit masters trivialize role reversal.
(4 Filmstrips, 4 Cassettes, 1 Teacher's Guide, 12 Ditto Masters)

Mothers and Fathers Series (4 sets)
Parents' Magazine Films, Inc.
52 Vanderbilt Ave. Grades 11-12
New York, New York 10017 1977 $230.00

A cross section of psychiatrists, psychologists, and pediatricians have developed these materials which portray people of varying ethnic groups, family composition, and income levels.

Children and Adults

Examines the effects that mother and father relationships have on young children. Includes topics of the quality of the relationship, single parents, and the child and society.
(5 Filmstrips, 3 Cassettes, 1 Teacher's Guide)

Family Relationships

Focuses on the key factors and issues which effect children and family relationships. Includes topics of the family structure, its effects on a child in our modern world, money and mobility, and family crisis.
(5 Filmstrips, 3 Cassettes, 1 Teacher's Guide)

Mother/Father Roles

Explores the changing roles and responsibilities of American parents. Examines topics of the parenting role, the role of provider, the role of nurturer, sex role formation, and society and roles.
(5 Filmstrips, 3 Cassettes, 1 Teacher's Guide)

Changes in the Family

Presents the impact of a changing society on the family. It includes topics of meeting parental obligations, working on relationships, reexamining roles, child care, and the need for support.
(5 Filmstrips, 3 Cassettes, 1 Teacher's Guide)

Non-Traditional Careers for Women
Pathescope
71 Weyman Avenue
New Rochelle, NY 10802
(1 Filmstrip, and 1 Cassette)

The Quiet Revolution of Mrs. Harris
The Media Guild 21 min./color
118 S. Acacia, Box 881 Grades 11-12
Solano Beach, CA 92075 1976 $265/$25r

Film depicts a woman's life as a traditional homemaker with a husband and four children and her gradual awakening to an awareness of her own needs. She returns to college, completes degree, and now works. Shows how her change affects each family member. Some reference to the women's movement.

The Re-Education of Women and Men: Creating New Relationships
Center for Humanities, Inc.
Two Holland Ave. Grades 9-12
White Plains, New York 10603 1076 $139.00

Encourages students to examine their attitudes toward traditional and non-traditional roles for women and men. Presents a series of situational dilimmas revolving around sex-related role conflicts. Clever introduction illustrates an infant's eye view of assigning roles based on sex. Feminine Perspective. Part I presents homemaker role as limiting, omits effect on children in period of adult role transition.

2) Books

Center for Science in the Public Interest. 99 Ways to a Simple Lifestyle. Garden City, NY: Doubleday, 1977. 381 pp., $3.50.

Elgin, D. Voluntary Simplicity: Toward a Way of Life That is Outwardly Simple, Inwardly Rich. West Caldwell, NJ: Morrow, William and Co. Inc. (6 Henderson Drive, 07706), 1981., $4.95.

Federal Energy Administration. Energy Conservation: Understanding and Activities for Young People. Washington, D.C.: Office of Conservation Education.

McFarland, M. & Ramstetter, V. Exploring Living Environment, Bloomington, IL: McKnight Publishing, 1977. 343 pp., $11.96 Grades 7-9.

Focuses on student decisions in the areas of home and community, understanding self and others, housing concepts, and planning for the future. Intent appears to be developing a range of skills for healthy living. Interwoven into several sections is information on understanding the influences of other people and the environment on individual roles. Half of the book's content is in the area of housing and housing skills. Helpful resources and information in teacher's manual.

Montana, P.J. and Higgenson, M.V. Career Life Planning for Americans: Agenda for Organizations and Individuals. AMACOM. 1978, 204 pp., $17.95.

In this book vital issues of key importance to individuals and organizations on career life planning are explored in depth. It is for people of all ages in need of advice on choosing the right career and adapting to changing job circumstances.

3) Magazines

J.C. Penney Company. New Perspectives on Changing Roles. Forum, Spring/Summer, 1979.

National Geographic Society. A special Report in the Public Interest: Energy, Facing Up to the Problem, Getting Down to Solutions. Washington, D.C. (Depat. 5000, 20036), February 1981. 10 to 99 copies $1.15 each; 100 or more, $1 each.

Sears Educator Resource Series. Energy/Ecology/Economics. Consumer Information Services. Sears, Roebuck, and Co. D/703. Sears Tower, Chicago, IL 60684

4) Pamphlets

Channing L. Bete Co., Inc. What Everyone Should Know About the Quality of Drinking Water. Greenfield, Mass., 1977.

Consumer Forum Plus: Changing Values: Where Are We Going? 1980. A packet of four pamphlets and the magazine Forum, $5.00, J.C. Penney Co., 1301 Ave. of the Americas, New York, NY 10019. These materials are distributed free by local J.C. Penney store managers to educators. These materials touch on a variety of significant topics that teen-age consumers should be aware of.

Florida Department of Environmental Regulation. Drinking Water. Twin Towers, 2600 Blair Stone Road, Tallahassee, Florida, 32301

Florida Department of Environmental Regulation. Nonpoint Source Pollution. Twin Towers, 2600 Blair Stone Road, Tallahassee, Florida, 32301.

Florida Department of Environmental Regulation. Permitting. Twin Towers, 2600 Blair Stone Road, Tallahassee, Florida, 32301

Florida Department of Environmental Regulation. Wetlands. Twin Towers, 2600 Blair Stone Road, Tallahassee, Florida, 32301.

Governor's Office of Appropriate Technology. Solarwork, July, 1979. 1530 10th Street, Sacramento, CA 95814

National Solar Heating and Cooling Information Center. Passive Design Ideas for the Energy Conscious Consumer. P.O. Box 1607, Rockville, MD 20850.

National Water Well Association. Ground Water Pollution Control. 500 West Wilson Bridge Road, Suite 135, Worthington, Ohio, 43085.

United States Department of Energy. Professional Energy Careers; Office of Public Affairs. Washington, D.C. 20585. May, 1979

United States Department of Energy. Tips for Energy Savers. Free from U.S. Department of Energy. "Tips" Distribution, Office of Administrative Services, Washington, D.C. 20545.

United States Environmental Protection Agency. Acid Rain Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (#055-000-00198-7).

United States Environmental Protection Agency. EPA Journal Reprint: State of the Environment. 6(1), Jan., 1980. Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

United States Environmental Protection Agency. Is your Drinking Water Safe? Office of Public Affairs (S-107), Washington, D.C., 20460, March, 1977.

United States Environmental Protection Agency. Water: A Resource You Can Help Restore. National Recreation and Park Association, Arlington, Virginia and Design Communication Collaborative, Washington, D.C.

5) Articles

Elgin, Duane and Mitchell, Arnold. Voluntary Simplicity. The Co-Evolution Quarterly, Summer, 1977, 4-19.

Gregg, Richard. Voluntary Simplicity. The Co-Evolution Quarterly, Summer, 1977, 20-27.

6) Composite Listings of Voluntary Simplicity-Related Materials

Escambia County School District. A Guide to Resources for Family Living and Child Development. Myrtle Grove Instructional Center, 5402 Lillian Highway, Pensacola, FL 32506, 1979.

7) Other Teaching Materials

Ames, Nancy L.; Rhodes, Ilana; Steddins, Linda B. Sex Fairness in Career Guidance: A Learning Kit. Abt Publications, 55 Wheeler Street, Cambridge, MA 02138. 1975. Contains: handbook and guide, role playing activities, dittos, cassette tape of supplementary activities.

Women's Educational Equity Act Program. Focus on the Future. EDC/WEEAP Distribution Center, 55 Chapel St., Newton, MA 02160. $2.00

This package includes leader's manual and sets of drawings which are designed to help adolescents recognize their own biases and see how they influence career choices and family relationships.

INTEGRATING VOLUNTARY SIMPLICITY OF LIFESTYLE INTO HOUSING

VOLUNTARY SIMPLICITY

IN

HOUSING

OVERALL AND ACTIVITY OBJECTIVES

Upon completion of this unit, participants will be able to:

OVERALL OBJECTIVES	ACTIVITY OBJECTIVES	ACTIVITY
1) Define the concept Voluntary Simplicity		
	1a) List some lifestyle practices that are examples of Voluntary Simplicity.	3
	1b) Define the terms associated with the meaning of Voluntary Simplicity of Lifestyle	4
2) Identify some of his/her goals, noting those which are compatible with Voluntary Simplicity, and propose some ways of reaching those goals.		
	2a) Use their imaginations to think about their lives in the future.	10
3) List reasons why it is necessary to practice conservation attitudes about energy and resources as they effect each person's lifestyle.		
	3a) Define and discuss the concept of "peaking" as it applies to the use of electrical energy in the home	13
	3b) List four factors which make installing insulation in a home a wise decision by the consumer . .	14
	3c) Identify at least five areas of building where insulation is most needed.	14

OVERALL OBJECTIVES	ACTIVITY OBJECTIVES	ACTIVITY
4) Discuss the energy, resource, and economics advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practives.		
	4a) Identify the three largest areas of residential energy consumption in the state of Florida. . . .	12
	4b) Read the electric meter, to determine how much energy your family is saving.	15
	4c) Identify and describe at least four energy-saving features that are now available in housing construction.	20
5) Identify the personal reward and value in making the choice to seriously practice simplifying ones lifestyle.		
	5a) Discuss ways that the students can have an effect on these problems. Explain how these activities make the students feel about themselves.	11
	5b) Discuss the personal benefits of reducing energy used for air conditioning, water heating, and refrigeration	12
6) Identify and discuss creative solutions to lifestyle problems related to energy, economics, and resources		
	6a) To become aware of alternative solutions to the challenges of both our physical and social environments.	1
	6b) Demonstrate that people often know more than they think they know about a given subject.	2
	6c) Prepare media appropriate for informing others about problems involving energy, economics, and resources	11

OVERALL OBJECTIVES	ACTIVITY OBJECTIVES	ACTIVITY
	6d) List at least three ways to take advantage of natural ventilation/cooling in a home	16
	6e) Identify five steps which can be taken to cut costs and save energy in operating an air conditioning system	17
	6f) Discuss four factors which make the use of solar energy a desirable alternative to the use of conventional fuels	18
	6g) Discuss three ways to take advantage of solar heating without installing equipment	19
	6h) List at least five ways to increase efficiency and decrease the operating cost of a refrigerator	21
	6i) List at least five ways to conserve hot water and decrease the amount of energy needed to heat water	22

Integrating Voluntary Simplicity into Housing
In THE NEW CURRICULUM FRAMEWORK FOR HOME ECONOMICS IN FLORIDA

The topics on the left are mentioned in the Housing unit on Voluntary Simplicity. Corresponding number and letter notations, on the right, suggest the most appropriate place the topic will fit into the outlined courses presented in The New Curriculum Framework For Home Economics In Florida.

Topic	Part	Page	Concept No.
Future Trends in Housing	II	74	IE
Heating and Cooling the Home	II	74	4D
Home Construction Features	II	74	4.0
Energy Conservation	II	74	4E
Landscaping	II	74	7.0

GLOSSARY

To the Teacher: The glossary is provided for two purposes. First, you can use it as a preliminary learning activity in itself, to familiarize yourself and your class with relevant terminology before starting the unit. Second, you can use it as a ready reference for vocabulary terms encountered in the unit background information and activities. In either case, copies can be xeroxed for student use.

Active Solar Energy: Use of the energy of the sun which requires electrical power to operate pumps or fans to move and store air or water which has been heated by the sun.

BTU (British Thermal Unit: A measure of heat; a BTU = the amount of heat necessary to raise the temperature of one pound of water 1 degree Fahrenheit. Roughly compares to the amount of heat produced by the burning of a wooden kitchen match.

Caulking: Stopping up cracks in window or door frames with a filler.

Conservation: The care or preservation of natural resources by wise use or management.

Deciduous: A type of tree or shrub which loses its leaves each fall and grows new ones in spring. Pecans and dogwoods, for example are deciduous trees.

E.E.R. (Energy Efficiency Ratio): An expression of how efficiently an appliance uses electricity. It is computed by dividing the BTU's per hour generated by an appliance by the watts of electricity used. The higher the E.E.R. the more efficient the appliance, and the lower the cost of operating it.

Electrical Usage Peaks: Periods of time during which the power company must increase its production of electricity to meet heavy demand from customers.

Energy: The capacity to do work; the power available to make something move.

Fossil Fuels: Naturally occurring fuels such as petroleum, coal, and natural gas, formed from the remains of prehistoric organisms.

Insulation: Any materials that inhibit the flow of heat from one area to another.

Lifestyle: A person's (or family's) preferred approach to living, including moral attitudes, preferred entertainment, living arrangements, style of dress and occupational choice.

Non-renewable Resources: Natural products like petroleum, coal and other fossil fuels which take a very long time for nature to form and which, once used up, cannot be replaced.

Passive Solar Energy: Use of the energy of the sun without mechanical devices; an example is a regular window which is placed in such a way as to let in natural breezes in summer and the heat of the sun in winter.

Resource: A source or supply of something that is held in reserve; the estimated total quantity of something like minerals in the ground.

Solar Energy: That energy which directly results from the heat or light produced by the sun's rays.

Traditional Lifestyle: One's preferred approach to living which is based on the way most people have chosen to live in the past.

Ventilation: System by which air flow and circulation is achieved.

Voluntary Simplicity: A lifestyle in which individuals choose to live more simply, in consideration of the limited nature of the world's resources and with concern for the quality of life. This includes recycling, home production of foods, conservation of nature and energy, and an emphasis on sharing companionship and skills.

Weather Stripping: Thin strips of metal, felt or foam used around the edges of doors and windows to keep out drafts, rain, etc.

Activity 12: Three Big Users of Electricity in Florida Homes

Overall Objective

Discuss the energy, resource, and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.

Identify the personal reward and value in making the choice to seriously practice simplifying one's lifestyle.

Activity Objective

Identify the three largest areas of residential energy consumption in the state of Florida.

Discuss the personal benefits of reducing energy used for air conditioning, water heating, and refrigeration.

Directions:

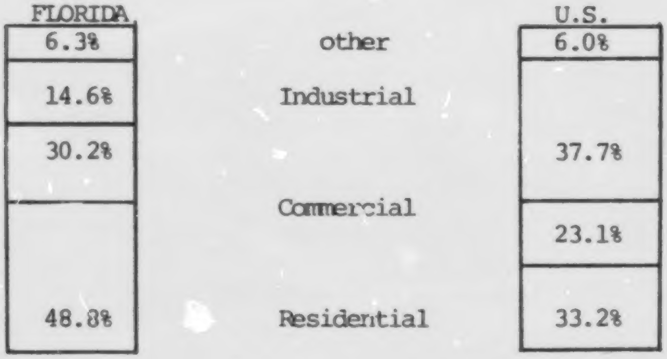
This activity and the related background information on the next page are very important to the housing unit, since it forms the basis for understanding how to be effective in home energy conservation. As stated in the objective, the central idea that the students are to get from this activity is that 70% of total energy consumption in the average Florida home is used for air conditioning, water heating, and refrigeration. Many of the subsequent activities on this unit are devoted to ways of conserving energy in those three areas, so the idea is an important one for students to get. Please encourage students to express their feelings about the large amount of energy consumed in these ways, and what they would benefit by reducing this energy use.

Both the background information and the activity can be either duplicated and passed out to the students or communicated by you, using illustrations on the blackboard. In either case, you will probably need to help the students get started on the mathematical calculations.

Background Information:

Since the state of Florida has relatively little industry compared with other states, a greater portion of the electricity we consume is used in the home. As seen in the following illustration, nearly half of the electricity sold in Florida is for residential use, compared to a national average of only about a third.

Percentage of sales of electricity by type of service*



* Governor's Energy Office, State of Florida, 1977.

This means that Florida residents can personally have a great impact on energy consumption by conserving energy in their own homes.

As we think about reducing the amount of electricity you use at home, it is important to know where the big energy users are. For example, using your electric toothbrush only once a day instead of twice will have almost no effect on your electricity consumption. But setting the air conditioner thermostat at 78° instead of 75° can make quite a sizable difference in your electricity bill. So, to be effective in conserving energy, you really need to know where to conserve. The following chart will show you what percentage of the residential energy use in Florida goes for which appliances.

70%	31.2%	Air Conditioning
	26.4%	Water Heating
	12.4%	Refrigeration
	9.9%	Space Heating
	9.7%	Misc. (clothes drying, T.V., etc.)
	5.2%	Cooking
	5.2%	Lighting

* Governor's Energy Office, State of Florida, 1977.

ACTIVITY A:

You can see that the big energy users in Florida residences are air conditioning, water heating, and refrigeration. Together, the "big three" add up to 70% of total residential energy consumption. So, to be the most effective at energy conservation, you would probably want to look first at your family's use of those appliances. This does not mean that it is not worthwhile to turn off unneeded lights, since every little bit of conservation helps. What it does mean is that the greatest savings in energy usage will come from more responsible use of the appliances which use the most electricity.

Some simple arithmetic can demonstrate how the most energy can be conserved by concentrating on appliances which are the biggest users. Let us take, as an example, a Florida family whose monthly electricity bill is $100.00. Using the figures from the chart on Florida residential energy use, we can estimate what part of the bill goes for which appliances:

31.2%	x	$100.00	=	$31.20	Air Conditioning
26.4%	x	$100.00	=	$26.40	Water Heating
12.4%	x	$100.00	=	$12.40	Refrigeration
9.9%	x	$100.00	=	$ 9.90	Heating
9.7%	x	$100.00	=	$ 9.70	Misc.
5.2%	x	$100.00	=	$ 5.20	Cooking
5.2%	x	$100.00	=	$ 5.20	Lighting
				$100.00	TOTAL

Question 1: Approximately how much money will this family save each month if they can reduce the use of miscellaneous appliances, cooking appliances, and lighting by 25%?

Solution : 25% x $9.70 (Misc.) = $2.43
25% x $5.20 (Cooking) = $1.30
25% x $5.20 (Lighting) = $1.30
Answer = $5.03

Question 2: Approximately how much could the same family save by reducing their use of air conditioning, water heating, and refrigeration by 25%?

Solution : (This one is for you to figure out!)

25% x $____ (Air Condit.) = $_____
25% x $____ (Water heating) = $_____
25% x $____ (Refrigeration) = $_____
Answer = $_____

How do the two answers compare? Which amount of money would you rather save?

ACTIVITY B:

Now go through the same process with your own family's electricity usage. First, find out how much your family's last electricity bill was, then do questions 1 and 2 above, using the same percentages and substituting your bill for the $100.00 used in the example.

31.2%	x	$_____	=	$_____	Air Conditioning
26.4%	x	$_____	=	$_____	Water Heating
12.4%	x	$_____	=	$_____	Refrigeration
9.9%	x	$_____	=	$_____	Heating
9.7%	x	$_____	=	$_____	Misc.
5.2%	x	$_____	=	$_____	Cooking
5.2%	x	$_____	=	$_____	Lights
				$_____	TOTAL

About how much could your family save in a month by reducing miscellaneous, cooking, and lighting electricity use by 25% ?

$__________

About how much could you save by reducing A/C, water heating, and refrigeration electricity use by 25%?

$__________

ACTIVITY 13 Peak Usage of Electricity

OVERALL OBJECTIVE

List reasons why it is necessary to practice conservation attitudes about energy and resources as they effect each person's lifestyle.

ACTIVITY OBJECTIVE

Define and discuss the concept of "peaking" as it applies to the use of electrical energy in the home.

Directions:

This activity proposes a creative way to save energy in the home without even reducing the amount of electricity used. It can be done simply by using certain appliances at different times. The idea is that during peak hours it takes more fuel for the electric generators to supply consumers with electricity than during off hours. If people could switch some of their electricity-consuming tasks to off hours, then the demand for power would be leveled out, enabling power plants to operate more efficiently. The purpose of this activity is to make students and their families aware of peaking and to encourage them to think of and implement some solutions to the problem. This is one of the activities that takes Voluntary Simplicity home to students' families, so the last part of the activity - talking with their families about peaking - is a very important part of the activity.

Background Information:

One of the more obvious ways to reduce consumption of electricity is by turning off some appliances when it is not necessary for them to be on. Perhaps a less obvious method of conserving energy is to give attention to when the appliances are used. There are certain periods of time during each day when the demand for electricity is either very high or very low. For example, the period of time from about 5:00 to 10:00 P.M. on weekdays is a time when there is a great demand for electricity. During those hours, most people are getting home from work and turning on air conditioners, stoves, T.V.'s, ovens, etc., and the result is that the utility company where electricity is generated must supply all its customers with enough electricity. Such times when demand is highest are known as electrical usage "peaks."

The problem with peaking is that electrical generating plants generally operate less efficiently during peak periods. In times of "normal" demand for electricity, the plants usually operate their largest and newest generators, which tend to be the most fuel efficient. But when demand exceeds the capacity of the main generators, the utility companies bring standby generators into use, and these tend to be smaller, older, and less fuel efficient. So during peak usage periods, not only does the plant have to produce more electricity, but each unit of electricity produced is more costly in terms of both energy consumption and money.

What this means to you as a consumer of electricity is that the more electricity is used during peak periods, the higher everyone's utility bill will be, due to inefficient fuel usage. On the other hand, if electricity usage could be leveled out over the whole day, then the utility plant could generate the needed electricity at less than peak costs, and all its users' electricity bills would be lower.

One way that everyone can help to reduce peaking is by using major appliances during hours other than peak periods. Can you think of any appliances your family uses during the early evening hours which could be used at other times?

ACTIVITY

Write a list of the electrical appliances your family uses during the evening (peak) hours.

____

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Now list any of those appliances which could be used at another time, avoiding peak period usage. Write down the alternate times you might suggest.

APPLIANCE	TIME
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________

After you have completed your list, talk it over with classmates and share ideas. The final and most important step is taking your ideas home to your family so that you can put them into operation. After talking with your family, share with your class any changes you made.

ACTIVITY 14 Insulation - Why?

OVERALL OBJECTIVE

List reasons why it is necessary to practice conservation attitudes about energy and resources as they effect each person's lifestyle.

ACTIVITY OBJECTIVES

List four factors which make installing insulation in a home a wise decision by the consumer.

Identify at least five areas of a building where insulation is most needed.

Directions:

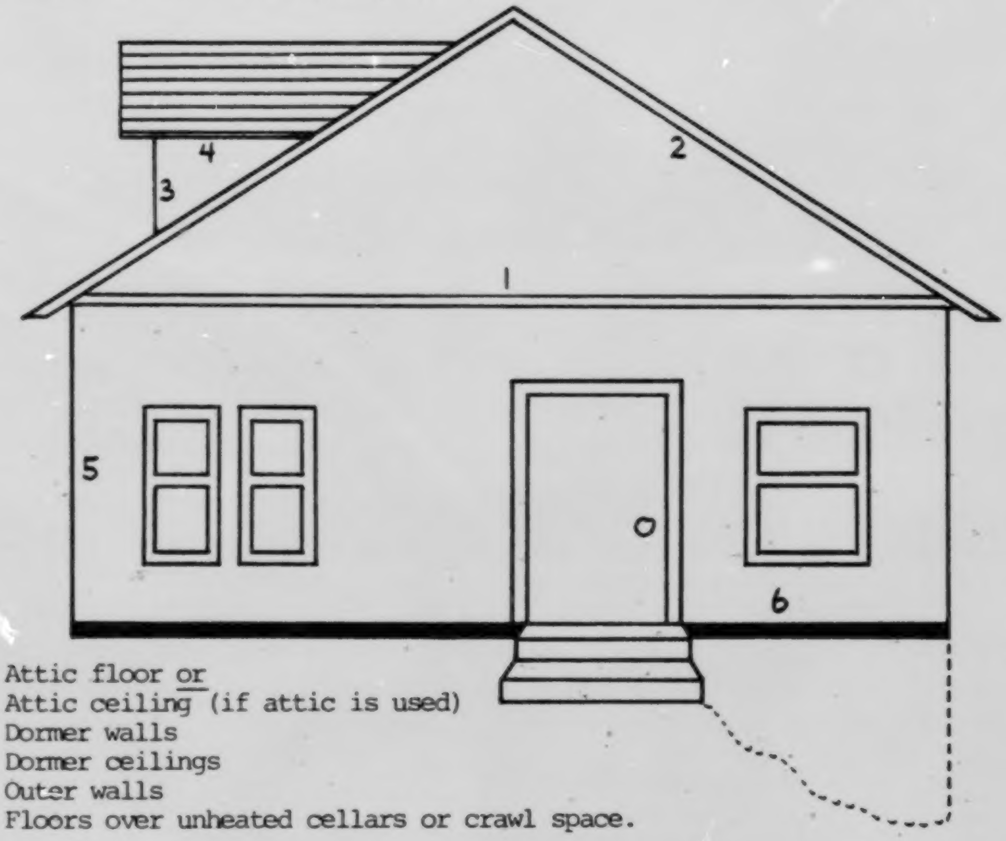
This activity is an opportunity for students to use some of their creative talents in drawing a diagram of their home and to take some Voluntary Simplicity ideas home to their families. One thing for you to help the students with is the fact that they live in different situations; that is, some of them live in homes owned by the family and others may live in rented apartments or homes. Obviously, families who are renting would have much less control over their living quarters than those who own them. But it is still useful for them to get these concepts, with the expectation that at some time in their lives they will probably own homes and can use the ideas.

Since home air conditioning is the largest consumer of residential energy in Florida, it is important to explore ways of cooling homes more efficiently. One of the ways to do this is by effective insulation. Can you list four reasons why insulating your home would be a wise consumer decision?

Share your ideas with your classmates and add any new ideas to your list.

WHERE TO INSULATE?

Where is insulation needed in a home? The illustration below shows critical areas for heat and cooling loss:



1 - Attic floor or
2 - Attic ceiling (if attic is used)
3 - Dormer walls
4 - Dormer ceilings
5 - Outer walls
6 - Floors over unheated cellars or crawl space.

ACTIVITY:

Look through your own home and find out which walls, floors, and ceilings adjoin unheated and uncooled areas. (If you live in an apartment, join a friend who lives in a home and do your insulation survey together.) Draw a diagram like the one on page 111 of your home, listing the places where heated or cooled air could escape. Are those places insulated? Talk over your discoveries with your parents.

Activity 15 Meter Reading

OVERALL OBJECTIVE:

Discuss the energy, resource and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.

ACTIVITY OBJECTIVE:

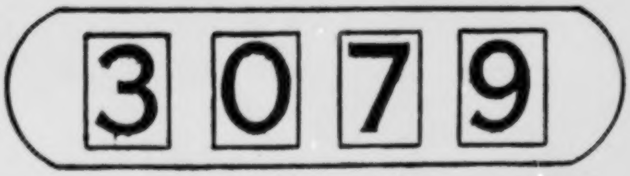
Read the electric meter, to determine how much energy your family is saving.

Directions:

In this activity, students learn to read the electric meter. The electric meter tells you how many Kilowatt hours have been used. The difference in the reading from one month to the next is the Kilowatt hours used.

There are three different meters. The easiest of these to read is the cyclometer. You read it just like the mileage on your automobile (see figure No. 1).

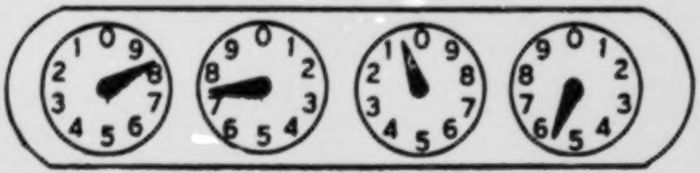
FIG. NO. 1



3079 KILOWATTS

The other types of meters are either four or five dial meters. (see figures No. 2 and No. 3). A four dial meter will read up to 10,000 kilowatt hours before it starts over again. A five dial meter will read up to 100,000 kilowatt hours before it starts over again.

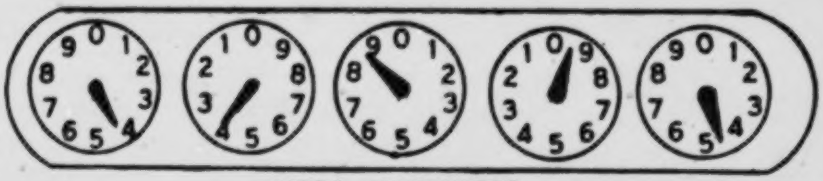
FIG. NO. 2



8705 KILOWATTS

To read your meter, read each dial from left to right. To read each dial you use the number last passed by the dial hand. For example, if the dial hand has passed five and is not to six yet, you read that dial as five. The dial has passed the larger number if the dial on its right has just passed zero. Write down the figures from each dial in the same order you read them from left to right. Figures No 2 and No. 3 with the actual reading under them may help you to understand better.

FIG. NO. 3



43894 KILOWATTS

Ask the utility company for a record of your family's usage for each month over the last year. Compare your usage this month of this year, with your usage this month last year, trying to be as careful as possible as a total family to save energy.

The activity was adapted from the North Florida Residential Energy Audit Workbook, Tallahassee: Governor's Energy Office.

ACTIVITY 16 Air Conditioning - Naturally!

OVERALL OBJECTIVE

Identify and discuss creative solutions to lifestyle problems related to energy, economics, and resources.

ACTIVITY OBJECTIVE

List at least three ways to take advantage of natural ventilation/ cooling in a home.

Directions:

This activity deals with several ways of using natural ventilation to help cool homes or apartments - shading, ventilation, and night-time cooling. All can be used by both home owners and apartment dwellers. The background information explains how the three methods can be used, and the activity gives students the opportunity to 1) take these ideas home and 2) bring back other ideas their parents and grandparents may have. You might have an award for the most creative or unusual idea they bring back, or you might have parents or grandparents come in and talk with the class about how they used to stay cool in the days before home air conditioning was available.

Background Information:

There are many "natural" ways to cool your home or apartment, ways that take advantage of natural ventilation or shading, and that do not cost anything to implement.

1) Shading

One idea is to either choose a home or apartment that is shaded by trees and shrubs, or to plant trees and bushes around your house in a way that will shade it from the most intense rays of the sun. If you can shade your house from the sun, particularly on the south and west sides of the building, it will be several degrees cooler inside.

2) Cross-ventilation

Finding out which direction the wind usually blows where you live can help you save energy in your home or apartment and make it more comfortable. If you know which way the wind is blowing you can take advantage of cross ventilation -- that is, opening pairs of windows on opposite sides of the building so that natural breezes can flow through. You can experiment where you live by opening various combinations of windows and seeing which do the best job of cooling.

3) Nighttime cooling

Since temperatures at night are cooler than during the day, it is often possible to cool an apartment or a house by exchanging the hot air inside for the cooler air outside. One way is to open windows across the building from each other to achieve cross ventilation, and another is to use a window fan to blow the warm air out and draw the cool air in.

A third way to use cool night air to cool an apartment or home is to open the tops of upstairs windows and the bottoms of downstairs windows. This is done to take advantage of the fact that warm air is lighter than cooler air and tends to rise up above it. The warmest air in a room will be up by the ceiling and the coolest air down by the floor. If there are two floors, the warmest air will be upstairs and the coolest air downstairs. So, by opening the tops of upstairs windows and the bottoms of downstairs windows, you can cause hot air to flow out of the upper windows and cool air to flow into the lower windows.

Regardless of which method you use, the idea is to cool your living space by taking advantage of the cool night air outside.

ACTIVITY:

It may be helpful to you to remember that when your parents and grandparents grew up, they probably did not have electrical air conditioners. In the days when air conditioning was not available, people had to invent their own ways to keep cool in summer. Talk with your parents and with your grandparents and ask them what ideas they used to stay cool before they had air conditioners in their homes. Are there some of those ideas that you could use today in your home or apartment in order to stay cool and conserve energy at the same time? List those, and any other ideas you might have for taking advantage of "natural air conditioning" where you live.

ACTIVITY 17 Getting the Most Out of Your Air Conditioning

OVERALL OBJECTIVE

Identify and discuss creative solutions to lifestyle problems related to energy, economics, and resources.

ACTIVITY OBJECTIVE

Identify five steps which can be taken to cut costs and save energy in operating an air conditioning system.

Directions:

One important idea to be gotten across in this activity is that Voluntary Simplicity means reducing unnecessary use of resources, not doing without modern comforts and conveniences. Students should be able to suggest ideas which can reduce the amount of energy necessary to cool their homes with mechanical air conditioning.

ACTIVITY:

One thing that Voluntary Simplicity does not mean is doing without all the modern comforts to which you have become accustomed. What it does mean is that you may be able to use those conveniences more efficiently than you have up until now. An example of this is air conditioning. Doing without air conditioning in order to save energy is not a realistic solution to the problem, because very few people would be willing to go through the Florida summer without it. But many people might be willing to find ways to make their air conditioning more efficient, so that they can save energy and still be comfortable.

Listed below are a few ideas you might use to reduce the energy cost of your air conditioning while maintaining an acceptable level of comfort. Can you add some of your own ideas to the list?

1) Replace or clean filters frequently
2) Have equipment serviced regularly
3) Keep draperies closed - especially on windows that face the sun.
4) ____
______________________________.
5) ____
______________________________.
6) ____
______________________________.
7) ____
______________________________.

Which of the above ideas do you and your family already use? Are there some new ones your family may be willing to try?

ACTIVITY 18 Energy from the Sun

Overall Objective

Identify and discuss creative solutions to lifestyle problems related to energy, economics, and resources.

Activity Objective

Discuss four factors which make the use of solar energy a desirable alternative to the use of conventional fuels.

Directions:

There are two important lessons in this activity: 1) why solar energy is a good idea and 2) how it can be used instead of other energy sources. The activity asks students to be experts in an area and to suggest ideas for using solar energy for various jobs. They do not need any technical knowledge for this task; they are simply to use their imaginations and propose some creative ideas.

Background Information:

In an age when the end of the world's supply of non-renewable energy sources like petroleum is in sight, it is vital to explore all available possibilities for alternative sources. Two major alternative energy sources being considered now are nuclear energy and solar energy. Both have the capability of supplying the world's energy needs for many years to come, but there are some very serious problems associated with the production of electricity by nuclear reactors. One problem is the possibility of nuclear accidents, which could release harmful radiation into the earth's atmosphere. A second serious problem is the question of how to dispose of the highly toxic radioactive nuclear wastes produced by nuclear power-generating plants. We have to ask ourselves if it is really fair to store quantities of this material which future generations will have to deal with.

By way of contrast, the energy produced by the sun is relatively free of danger and harmful by-products. In fact, there are a number of facts which make the use of solar energy a very desirable alternative to the use of nuclear energy or conventional fuels. Solar energy is:

1) available in most places throughout the world
2) almost inexhaustible in quantity
3) non-polluting
4) free for the taking
5) a way to reduce dependency on imported fuels

ACTIVITY:

Using your imagination, make yourself a solar engineer for today. You have been hired by an architect to come up with ideas for how to design an all-solar-powered home. Look at the following list of jobs in the home that require energy, then make yourself an "expert" in one of them and write how you would use solar energy to do the job.

Choose one:

( ) space heating
( ) water heating
( ) cooking
( ) clothes drying
( ) lighting

How to do the job using solar energy:

____

____

____

____

After taking 10 minutes or so to write down your ideas, share your "inventions" with your classmates.

ACTIVITY 19 Using the Sun to Heat Your Home

Overall Objective

Identify and discuss creative solutions to lifestyle problems related to energy, economics, and resources.

Activity Objective

Discuss three ways to take advantage of solar heating without installing equipment.

Directions:

This is a very practical activity, because it deals with some ways families can take advantage of passive solar heating without any investment for equipment. As in other activities, there are limits to how much control renters have over their living situation, but many times they can choose apartments or rental homes with favorable shading, window exposure, and insulation conditions. The illustrations are provided to clarify the ideas, and should be shared with the students. A choice of two different activities is offered, so you can select the one that is more workable for you.

Background Information:

As you may already know, there are solar heating units available which can be installed in buildings to use the sun's energy to warm the air. But something you may not have thought of is the possibility of using the sun for space heating without installing any new equipment. There are basically 3 things you can do to take advantage of solar energy to heat your home. The first two ways to do this involve letting the sun's heat into your home, and the third involves keeping it there.

1) Trees and Shrubs

When we talked earlier about keeping your home cool in summer, it was suggested that trees and shrubs could be used to shade the house from the sun's heating rays. But in winter, we have the opposite problem, and we want the sun to warm the building. So how do we solve this problem? There are two ways.

First, the sun may strike your home from slightly different angles in winter and in summer. You can easily check this yourself and see where you might plant trees and bushes to shade your home in summer and let some rays through in winter. The second idea you might use to solve this problem is to plant deciduous trees around your home. Some trees, like pines and oaks, keep their foliage all year round. Deciduous trees, on the other hand, grow a thick cover of leaves in spring and summer, and then lose them when the weather gets cold in fall. So they would naturally shield your home from unwanted solar heat in summer, and let in the warming rays in winter.

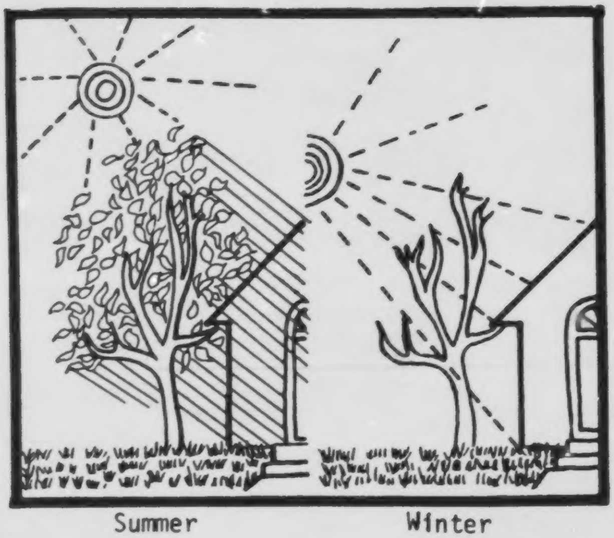


Figure 1. Summer and Winter Effects of Deciduous Trees on Sun's Radiation.*

2) Window Exposure

Since windows are one of the main areas of heat transfer between the inside and outside of a home, you can use them to let solar heat into the house in winter. If you open the drapes or blinds on the side of the house where the sun is shining, you may be surprised at how much heat will come in. At the same time, you can close drapes on the shade side of the building to keep the warm air from escaping through the windows.

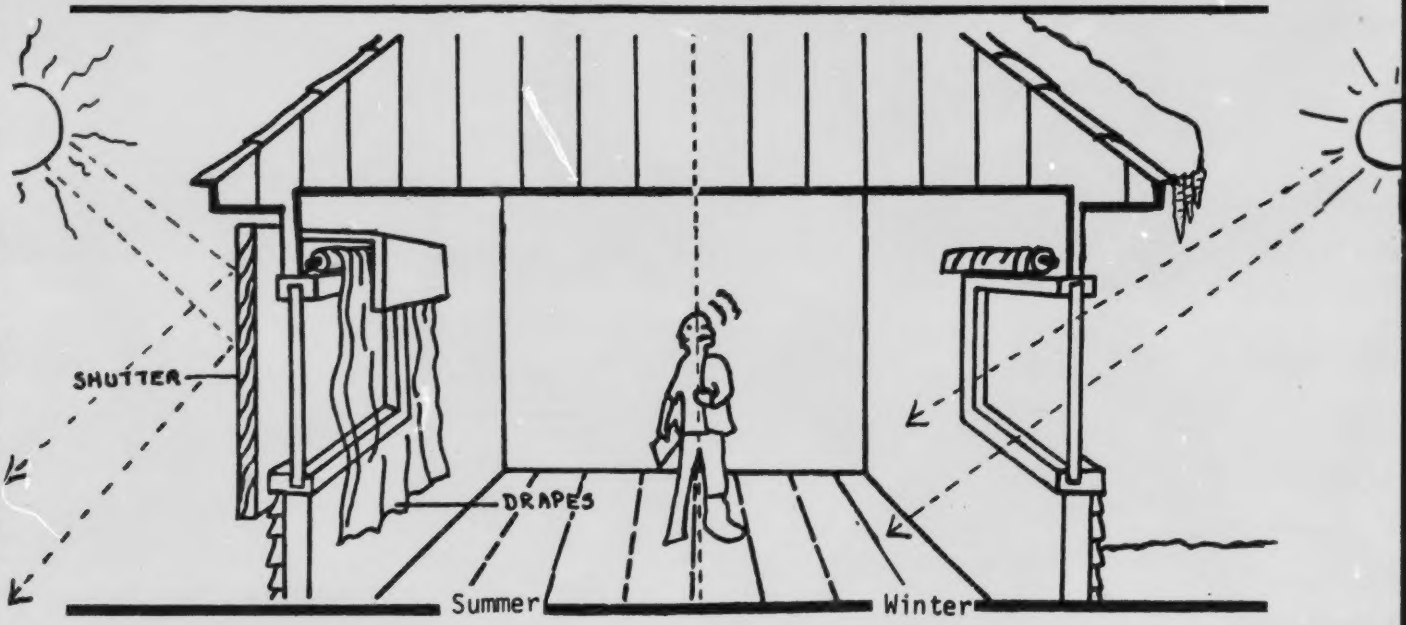


Figure 2. Use of Drapes to Let In Sun's Heat in Winter, Block Heat in Summer.*

3) Insulation

One of the most - if not the most - important factors in any heating system is good insulation. If your home is adequately insulated, any heating system will operate more efficiently. But if the insulation is inadequate, your heating system will be costly and inefficient - regardless of what kind of system it is.

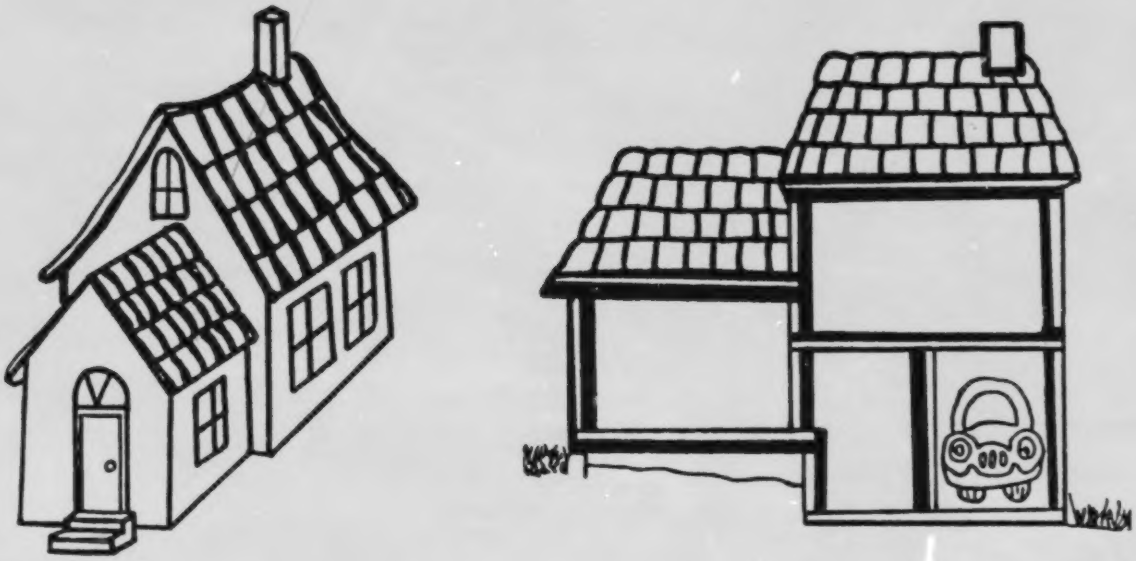


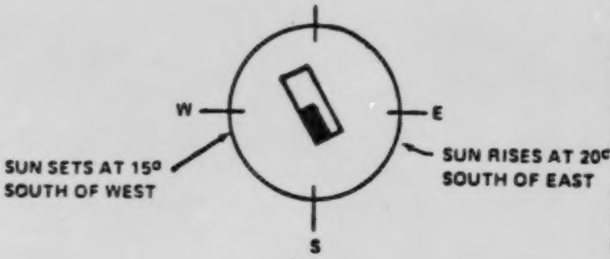
Figure 3. Home Insulation for Energy Efficiency.*

ACTIVITY:

Call or visit a nursery or garden center in your area. Find out the names of some fast-growing deciduous trees that might be used to shelter homes from the sun in summer and let the warmth through in winter. Possibly someone at the garden center or at a landscaping service would be willing to come and talk with your class about the use of trees and shrubs in natural heating and cooling of homes.

ALTERNATE/ADDITIONAL ACTIVITY*:

The way in which your home is oriented to the sun and wind affects the impact of the climate and the energy needed to maintain comfort. To understand this concept, it is helpful to determine the compass orientation of your home. First, think of your home as a box (usually a rectangular box) and view it from a bird's perspective. Given the directions of the compass on the circle below, locate your house in the center facing the appropriate direction. Use a compass to determine which direction each side of your home faces. It may not be directly N, S, E or W, but using the face of the compass and this circular representation you should be able to make a good estimation of the direction. Once the house is sketched on the circle, use your compass to locate the point at which the sun rises and sets.

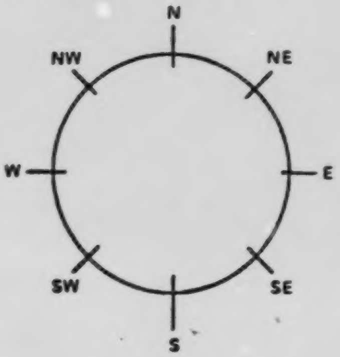


In the example on the left, the house is rectangular and the living area (the family room/kitchen) is represented in black. You can see that the long axis of the house runs slightly W of North by slightly E of South. The points indicating the sunrise direction and sunset are marked. Conclusion: The family room area will receive the afternoon sun and be a "sun warmed" area. This could be beneficial or bad depending on the climate.

Use the circle on the right to locate your house.

Instructions:

1. Draw in your house's orientation to the compass.
2. Draw in where the sun rises and sets.
3. Where are the living areas (den, family room, kitchen) of your house in relation to the compass?
4. Are the living areas exposed to morning or afternoon sun?



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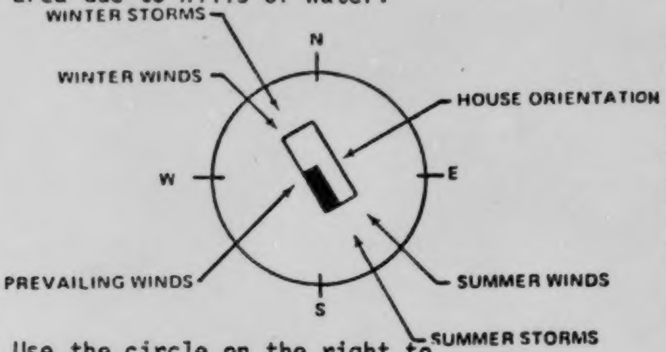
*U.S. Department of Energy. Energy Conservation in the Home. Knoxville: University of Tennessee Environment Center, October, 1977.

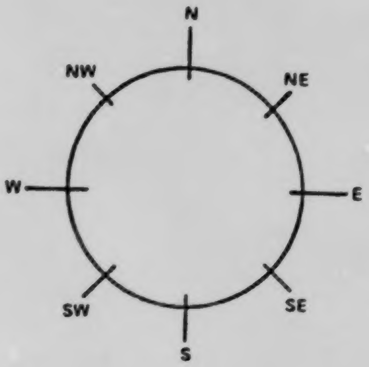
In addition to the sun, the winds also can be located on a similar drawing. Using the same example, we can illustrate the direction from which the winds affect the house. Information about winds can be found through observation or by inquiring at your local weather bureau, agricultural extension service, or news agencies. There may be slight differences within a local area due to hills or water.



In the example, the living area is only exposed to prevailing winds and slightly to summer storm winds. The winter winds are from the NW, so the example house should not have large window areas on the NW side if it is located in a temperate or cool climate zone.

Use the circle on the right to locate your house.
Instructions:

1. Locate house orientation.
2. Locate prevailing winds.
3. Locate summer winds and summer storms.
4. Locate winter winds and winter storms.
5. Which areas of your house are exposed to storm winds? To winter winds?



WIND ORIENTATION

Question: Do you feel your house has a good or poor orientation to the sun and wind? Why?

Suggestion: The teacher may need to demonstrate how to use a compass. Locate the classroom on a circular grid.

ACTIVITY 20 Designing Your Energy Efficient Dream Home

Overall Objective:

Discuss the energy, resource, and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.

Activity Objective:

Identify and describe at least four energy saving features that are now available in housing construction.

Directions:

This is an activity in which students can use their creativity and have a good time while learning some Voluntary Simplicity concepts. You will probably need to spend some time talking over the six listed energy efficiency features to be sure the class understands how each saves energy and money. Then copies of the sample floor plan should be handed out or passed around to give students the idea of what a floor plan looks like. Once they have studied it, they are ready to design their own "dream homes". They can use some of the symbols used on the sample, but be sure to encourage them to be original and creative while designing their energy efficient dream home. When they are finished, have them share their creations with classmates.

Background Information:

There are many features that can be built into the design of a new home so that the energy costs of living in that home can be minimized. At some time in the future, as you consider the possibility of building a home for your family, you may be able to save both energy and money by building some of these ideas into your home. The following features are available now and are low cost ways to build energy efficiency into a home:

1. Use 2" x 6" wall studs instead of 2" x 4", to allow for six inches of insulation in walls.
2. Use insulated double pane windows or single windows with storm windows to insulate the home.
3. Install power ventilators in attic to remove hot air in summer.
4. Locate major systems, like heating, cooling, and hot water system centrally in the building.
5. Avoid two-story house designs and high, peaked ceilings in order to heat and cool more efficiently.
6. Take advantage of natural factors like prevailing winds, angle of sun, trees and hills, etc. for natural cooling and heating.

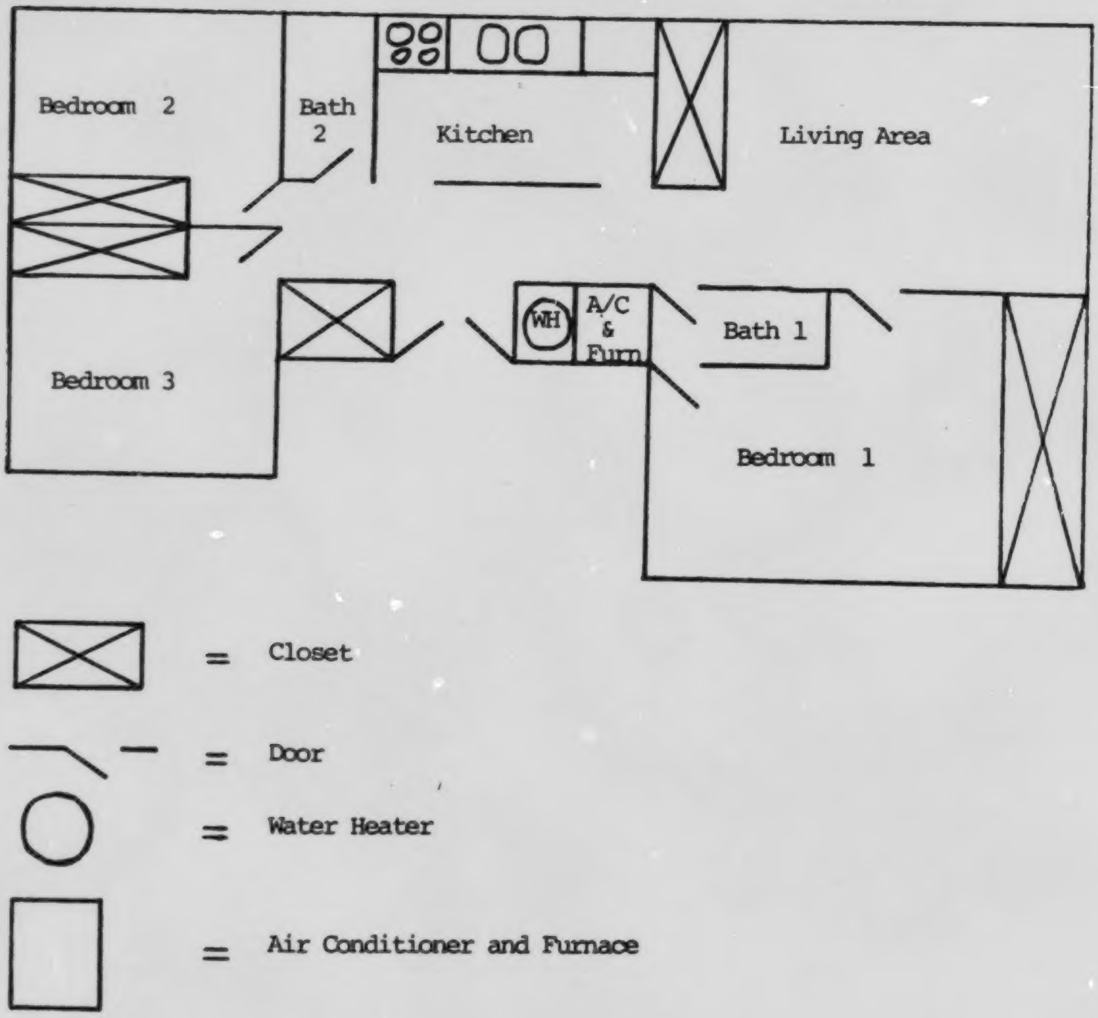
ACTIVITY 20

Activity:

Central location of heating and cooling systems saves money and energy because heated air or water have a chance to cool off if they have to be moved long distances through ducts or pipes, and cooled air warms up as it is moved to other areas. So, the less the distance between the place where water is heated or air is cooled, the more energy efficient the home is. Here is your chance to design your own dream home, with energy efficiency in mind. On the following page is a floor plan of a single story home. Look it over, then design your own home in the space provided. You can put the rooms and appliances and furniture anywhere you want, but remember to locate the heating and cooling units centrally so that your home is an energy efficient one.

ACTIVITY 20

SAMPLE FLOOR PLAN


Bedroom 2
Bath 2
Kitchen
Living Area
WH
A/C & Furn
Bath 1
Bedroom 3
Bedroom 1
= Closet
= Door
= Water Heater
= Air Conditioner and Furnace

ACTIVITY 20

YOUR DREAM HOME

ACTIVITY 21 COOLING DOWN THE COSTS OF REFRIGERATION

Overall Objective:

Identify and discuss creative solutions to lifestyle problems related to energy, economics, and resources.

Activity Objective:

List at least five ways to increase efficiency and decrease the operating cost of a refrigerator.

Directions:

Activity 17 on refrigeration is in a game format you can use in a number of ways. Students are asked to examine the list of 10 ways to increase refrigeration efficiency and then see how many they can remember. You could present the list on a poster or an overhead projector for a specified time (two to four minutes), then remove it and ask students to write down as many of the 10 points as they can remember. Or, you could divide the class into teams before presenting the list and then see which team can remember the most items. In either case, the challenge and the competition should make it interesting and fun.

Activity: "Test Your Memory"

The following is a list of steps * which can be taken to save energy in the operation of home refrigerators and freezers. Look over the list for two minutes, then put it away and see how many of the steps you can remember.

1. Open refrigerator/freezer door only as infrequently and as briefly as possible.
2. Locate refrigerator/freezer in coolest part of the kitchen-away from range, windows, dishwasher, etc.
3. Provide adequate space behind, above and on sides for proper air circulation.
4. Defrost when more than 1/4 inches of frost builds up in or around freezer.
5. Let hot dishes cool off at least partially before placing in refrigerator.
6. Avoid overcrowding of refrigerator/freezer - leave space between containers.
7. Check gaskets by closing the door on a heavy piece of paper - if it pulls out easily, gaskets may be worn.
8. Vacuum clean coils on refrigerators and freezers every three months for more efficient cooling.
9. When purchasing a refrigerator, remember that a frost-free model uses 36% more energy than a manual defrost model.
10. Keep appliance full but not crowded - half empty appliances use more energy because it is more difficult to cool air than chilled food and liquids.

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* Christiansen, B. Consumer Use of Energy. Pittsburg, Kansas: Kansas Vocational Curriculum Materials Dissemination Center, 1978.

ACTIVITY 22 Water Heating Without Getting Into Hot Water on Your Utility Bill

Overall Objective:	Activity Objective:
Identify and discuss creative solutions to lifestyle problems related to energy, economics, and resources.	List at least 5 ways to conserve hot water and decrease the amount of energy needed to heat water.

Directions:

For this activity, students are asked to simply "brainstorm" in suggesting ideas for saving hot water. It can be done individually or on teams, or you might split the class into two parts and see which can come up with more ideas. In brainstorming, the idea is to write down all possible solutions to the problem, without really deciding whether or not they are workable. In this way, many creative ideas can be suggested, and even if some of them are not practical, they may be combined with others or further developed to come up with an idea that is creative and workable. In the process the following ideas (and others) may be suggested:

1. Check for leaks. A dripping faucet can waste up to 5,000 gallons of water in a year.
2. Locate water heater close to areas where most hot water is used.
3. Insulate hot water pipes to avoid heat loss.
4. Shower instead of bathing - average shower uses about 1/2 as much water as average bath.
5. Install water-saver in shower head.
6. Set water heater thermostat at 140° - adequate for even a dishwasher.
7. Insulate water heater with a fiberglass "jacket".
8. Do as much cleaning as possible with cold water.
9. Wait until there is a full load to run dishwasher or clothes washer.
10. When away from home for a few days, turn water heater off.

Activity:

Write down all the ideas you can possibly think of that might help your family save hot water in your home. You should be able to list at least five to ten ideas. After you have listed all you can think of, talk with classmates to see if they have any you haven't thought of, and vice-versa.

Supplementary Activities for Housing

Activity 23 -- Water Conservation

Place a measuring cup under a leaky faucet. Time how long it takes to fill the cup. Then divide that amount of time into 24 hours . This gives the number of cups of water wasted in one day. Multiply this wastage by 7 days.

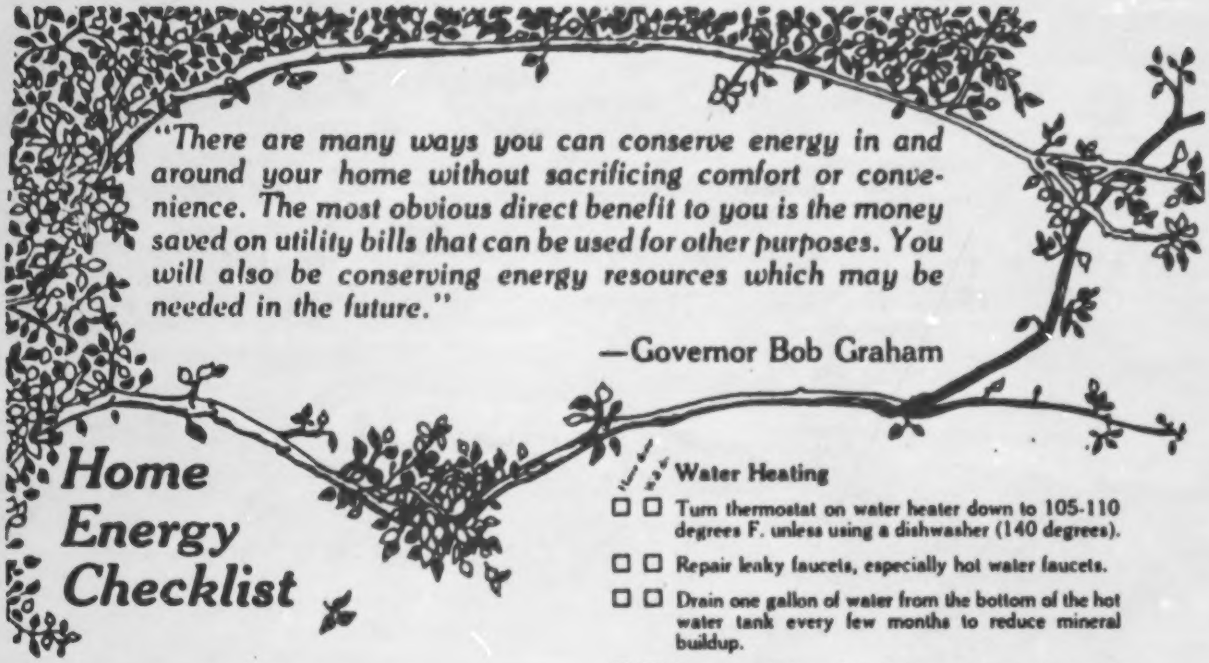
Activity 24 -- Home Energy Checklist

Using the Home Energy Checklist (attached), have the students respond to energy usage problems in their homes. The students should give examples of changes that could be made in their homes in order to reduce wasted energy.

The teacher may want to show the class examples of weather-stripping, caulking guns, shower restrictors, ect., to make the lesson more meaningful. The local Agricultural Extension Service may have some of these items.

Activity 25 -- Scavenger Hunt

Have the students go on a scavenger hunt around the school listing everything that they can find that wastes energy or resources. The teacher may want to prepare of list of things, such as "a place where heat is leaking from the building or cold air is entering," and see if the students can find them. The student that finds the most examples is the winner.



"There are many ways you can conserve energy in and around your home without sacrificing comfort or convenience. The most obvious direct benefit to you is the money saved on utility bills that can be used for other purposes. You will also be conserving energy resources which may be needed in the future."

—Governor Bob Graham

Home Energy Checklist

Begin today to develop an energy management plan for your home. First, check to see how good an energy manager you are now. Second, if you are not doing so, keep a record of how much energy you use each month—cubic feet (cf) of gas, kilowatt-hours (Kwh) of electricity, or gallons of LP gas. Third, plan and list the energy saving practices you will use for the next year.

This checklist will help you to identify ways you can become a better energy manager.

Checklist adapted from "Energy Management Checklist For the Home", Cooperative Extension Service, Mississippi State University. Used with permission.

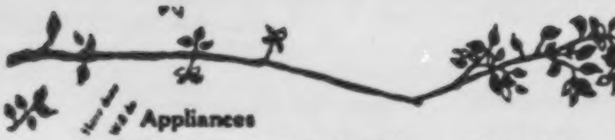
Lighting

☐ ☐ Turn off unnecessary lights, indoors and out.
☐ ☐ Keep lighting fixtures clean.
☐ ☐ Use bulbs with lower wattage in halls, stairways, and other areas of general illumination.
☐ ☐ Use a single, higher wattage bulb instead of several lower wattage bulbs.
☐ ☐ Install fluorescent lighting to get the maximum amount of light from the amount of electricity used.

Water Heating

☐ ☐ Turn thermostat on water heater down to 105-110 degrees F. unless using a dishwasher (140 degrees).
☐ ☐ Repair leaky faucets, especially hot water faucets.
☐ ☐ Drain one gallon of water from the bottom of the hot water tank every few months to reduce mineral buildup.
☐ ☐ Scrape and rinse dirty dishes and accumulate until dishwasher is filled before washing. When washing dishes by hand, wash them only once a day.
☐ ☐ Do not leave hot water running continuously while washing or rinsing dishes.
☐ ☐ Wash only full loads of laundry.
☐ ☐ Always rinse laundry in cold water; use heated water for the washing cycle only.
☐ ☐ Use water only as hot as necessary for adequate soil removal and sanitation.
☐ ☐ Sort and pretreat garments to obtain satisfactory results with one washing.
☐ ☐ Minimize the amount of hot water used in bathing; less water usually is used for short showers than for tub baths.
☐ ☐ Do not leave water running while shaving, brushing teeth, etc.
☐ ☐ Turn faucets off promptly after use.
☐ ☐ Avoid running hot water into pipes for minor uses, such as washing hands, especially when the water heater is distant from the faucet. Make a habit of using cold water or walking to a faucet closer to the heater.
☐ ☐ Reduce the amount of hot water used for showering by installing a flow restrictor in the showerhead.
☐ ☐ Install an insulating jacket around the water heater.
☐ ☐ Insulate exposed hot water pipes.

Copies of this list are available from the Governor's Energy Office
The Capitol
Tallahassee, Florida 32301
(904) 488-2475



Have done Will do

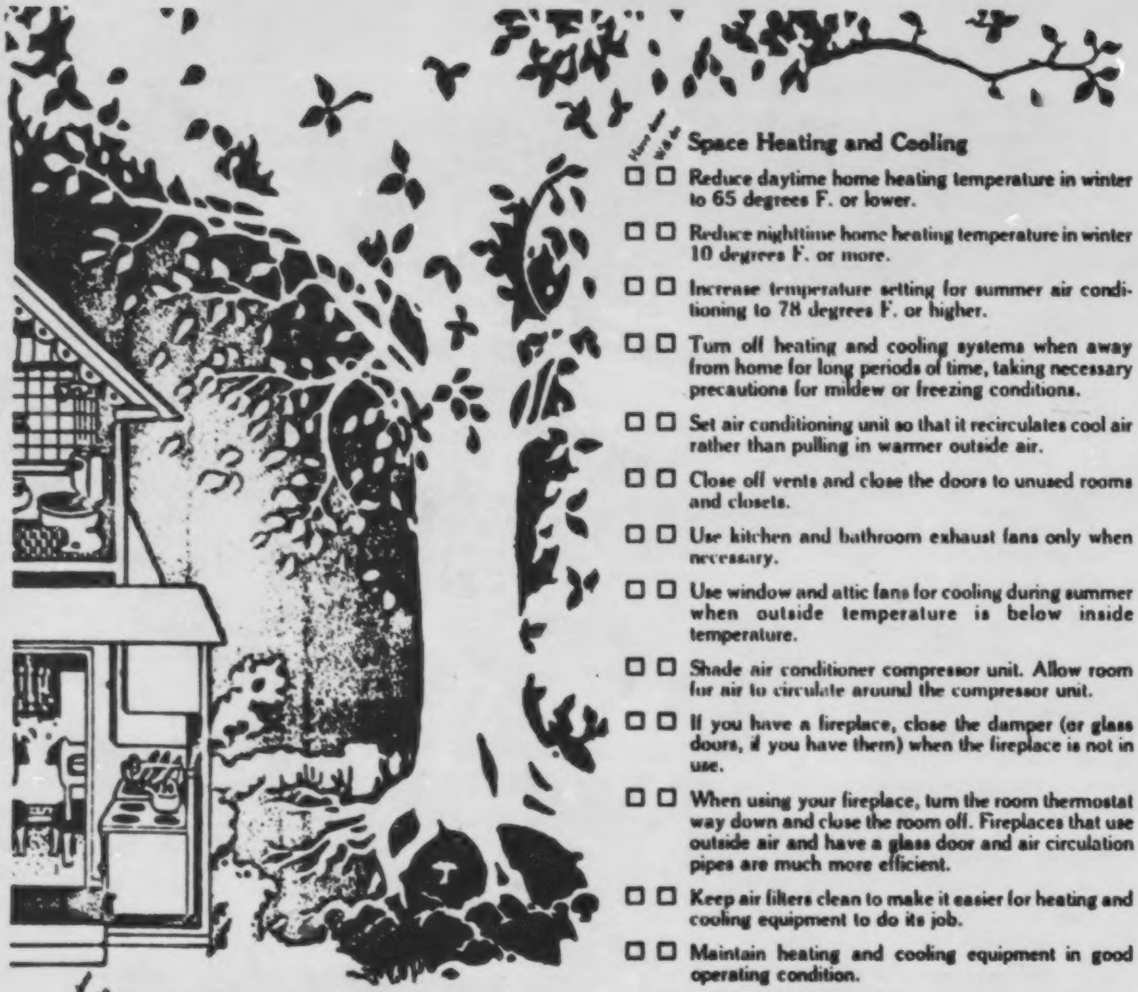
Appliances

- ☐ ☐ Line dry when practical, rather than using the dryer.
- ☐ ☐ Use the dryer efficiently; don't overdry; avoid drying only a few items at a time; clean the lint trap after every load.
- ☐ ☐ Remove items as soon as dryer stops to avoid unnecessary wrinkling that will require pressing.
- ☐ ☐ Vent dryer to exterior to prevent heat and moisture buildup in the house.
- ☐ ☐ When using the oven, use it to capacity.
- ☐ ☐ Preheat oven only when necessary; many foods do not require a preheated oven. If you must preheat, place foods to be baked into oven as soon as correct temperature is reached.
- ☐ ☐ Avoid opening oven door when oven is in use.
- ☐ ☐ Use tight fitting lids on pots and pans when appropriate.
- ☐ ☐ Use pots and pans which fit the burner unit.
- ☐ ☐ Reduce heat to the lowest temperature necessary when using surface burner units.
- ☐ ☐ Turn off oven and surface burner units promptly when food is cooked. Electric burners can be turned off before food is completely done.
- ☐ ☐ Use small appliances for cooking, baking and toasting. They are usually more efficient for small jobs than ranges.
- ☐ ☐ Avoid opening refrigerator or freezer door or holding it open unnecessarily.
- ☐ ☐ Keep grills and evaporator coils on refrigerator clean.
- ☐ ☐ Defrost refrigerator when frost buildup is ¼-inch thick.
- ☐ ☐ If cold air is leaking around refrigerator or freezer door (try pulling a dollar bill out after closing door on it), have door adjusted or gasket replaced.
- ☐ ☐ Turn off, empty, clean and leave refrigerator open when taking an extended vacation.
- ☐ ☐ Locate the refrigerator and freezer away from heat sources (range, heater, sunlight).
- ☐ ☐ Empty or replace the vacuum cleaner bag frequently for efficient operation.
- ☐ ☐ Eliminate unnecessary vacuuming and polishing; use hand equipment where possible.
- ☐ ☐ Turn off TV, radio or stereo when no one is watching or listening.
- ☐ ☐ Disconnect (or use "vacation setting") on instant-on TV when you are not going to be using it regularly.

Have done Will do

Building Envelope

- ☐ ☐ Weatherstrip doors and windows. Fix broken or cracked windows.
- ☐ ☐ Caulk cracks, foundation sill, around windows, where pipes enter the house, and where different materials, such as concrete and wood, meet.
- ☐ ☐ Install ceiling insulation — R-19 minimum.
- ☐ ☐ Install wall insulation — R-9 minimum.
- ☐ ☐ Install insulation in crawl space — R-11 minimum.
- ☐ ☐ Make sure the attic is well ventilated (1 sq. ft. of vent/150 sq. ft. of attic); outlet vents should be 3 ft. higher than inlet vents.



Have done Will do

Windows

☐ ☐ Install insulating drapes or interior shades. Close drapes and shades during the day in summer, during the night in winter.

☐ ☐ In the summer, close windows during the day when it is hotter outside than in; open in the evening if the temperature outside is cooler than inside.

☐ ☐ Plant fast-growing trees to shade the house.

☐ ☐ Use awnings, sunscreens or other exterior shading for windows. When building, plan a wide roof overhang to shade windows.

☐ ☐ Avoid large expanses of window when planning to build a mechanically conditioned home. Where glass is used, make maximum use of passive solar design techniques.

Have done Will do

Space Heating and Cooling

☐ ☐ Reduce daytime home heating temperature in winter to 65 degrees F. or lower.

☐ ☐ Reduce nighttime home heating temperature in winter 10 degrees F. or more.

☐ ☐ Increase temperature setting for summer air conditioning to 78 degrees F. or higher.

☐ ☐ Turn off heating and cooling systems when away from home for long periods of time, taking necessary precautions for mildew or freezing conditions.

☐ ☐ Set air conditioning unit so that it recirculates cool air rather than pulling in warmer outside air.

☐ ☐ Close off vents and close the doors to unused rooms and closets.

☐ ☐ Use kitchen and bathroom exhaust fans only when necessary.

☐ ☐ Use window and attic fans for cooling during summer when outside temperature is below inside temperature.

☐ ☐ Shade air conditioner compressor unit. Allow room for air to circulate around the compressor unit.

☐ ☐ If you have a fireplace, close the damper (or glass doors, if you have them) when the fireplace is not in use.

☐ ☐ When using your fireplace, turn the room thermostat way down and close the room off. Fireplaces that use outside air and have a glass door and air circulation pipes are much more efficient.

☐ ☐ Keep air filters clean to make it easier for heating and cooling equipment to do its job.

☐ ☐ Maintain heating and cooling equipment in good operating condition.

☐ ☐ Repair leaks and insulate heating and cooling ducts in spaces not heated or cooled.

☐ ☐ Install clock-thermostats or temperature setback devices on heating and air conditioning systems.

☐ ☐ Select an energy efficient air conditioning unit of the proper size for the space to be cooled. It is better to buy a slightly undersized unit than an oversized one.

This public document was promulgated by the Governor's Energy Office, using U.S. Department of Energy grant funds, at a cost of $750, or 3¢ per copy. Its purpose is to provide energy information to the citizens of Florida as required by s. 377.703(3)(d), F.S

RESOURCE LISTING

1) Audio-Visual Materials

The Energy Conservation in the Home "Agent Kit"
Clinare, Lillian, Farmer, L. and Reinhardt, Conrad
The University of Tennessee Energy, Environment and Resources Center
Knoxville, Tennessee ($65.00; State Department of Education and Energy Extension Services Offices in each state have been supplied sets).

This program is designed for use by extension service agents. (5 booklets -- The Energy Conservation Ethic, House: The Building Where You Live, Heating and Cooling, Food and Energy: You and Your Clothes, and 4 slide/tape programs -- Use and Consequences: The Energy Ethic, Wrap Up Your Troubles in Your Old Tool Box and Save, Save, Save, "Stop Thief!", The Energy Sandwich: There's More to it Than Meets the Eye)

Energy, A Matter of Choices
Encyclopedia Britannica Ed. Corp. — 22 minutes
425 N. Michigan Ave. — Grades 7-12
Chicago, IL 60611 — $290.00/$17.00 Rent

This is an excellent film which focuses on the shortage of electrical power, examines the social attitudes and technological forces which have led to the energy crisis and suggests alternatives which could overcome the crisis.

Lifestyles: Options for Living (Independent Living Series)
Maclean Hunter Learning Resources
P.O. Box 4381, Grand Central Station — Grades 11-12
New York, New York 10017 — 1976 $85.00
Part I: What is a Lifestyle?
Part II: Values, Goals, Decisions
Part III: Making Changes
Part IV: Decisions in Action

Challenges the viewer to imagine the future in terms of prescribed characteristics. Recognition of personal values is depicted as a critical factor in the process. Defines lifestyles in a flexible manner and gives examples. Stimulates thinking on values and future options. Presents a series of scenarios depicting people in life changes. Overview of change in American culture from past to present. Some emphasis on changing rules regarding male/female roles in society. Middle class orientation. Student spirit masters trivialize role reversal.
(4 Filmstrips, 4 Cassettes, 1 Teacher's Guide, 12 Ditto Masters)

2) Books

Center for Science in the Public Interest. 99 ways to a simple Lifestyle. Garden City, NY: Doubleday, 1977. 381 pp., $3.50

Elgin, D. Voluntary Simplicity: Toward a Way of Life That is Outwardly Simple, Inwardly Rich. West Caldwell, NJ: Morrow, William and Co., Inc. (6 Henderson Drive, 07706), 1981, $4.95.

Federal Energy Administration. Energy Conservation: Understanding and Activities for Young People. Washington, D.C.: Office of Conservation Education.

McFarland, M. & Ramstetter, V. Exploring Living Environment, Bloomington, IL: McKnight Publishing, 1977. 343 pp., $11.96 Grades 7-9.
Focuses on student decision in the areas of home and community, understanding self and other, housing concepts, and planning for the future. Intent appears to be developing a range of skills for healthy living. Interwoven into several sections is information on understanding the influences of other people and the environment on individual roles. Half of the book's content is in the area of housing and housing skills. Helpful resources and information in teacher's manual.

Montana, P.J. and Higgenson, M.V. Career Life Planning for Americans: Agenda for Organizations and Individuals. AMACOM. 1978, 204 pp., $17.95.
In this book vital issues of key importance to individuals and organizations on career life planning are explored in depth. It is for people of all ages in need of advice on choosing the right career and adapting to changing job circumstances.

3) Magazines

J.C. Penny Company. New Perspectives on Changing Roles. Forum, Spring/Summer, 1979.

National Geographic Society. A special Report in the Public Interest: Energy, Facing Up to the Problem, Getting Down to Solutions. Washington, D.C. (Dept. 5000, 20036), February 1981. 10 to 99 copies $1.15 each; 100 or more, $1 each.

Sears Educator Resource Series. Energy/Ecology/Economics. Consumer Information Services. Sears, Roebuck, and Co. D/703. Sears Tower, Chicago, IL 60684

4) Pamphlets

Channing L. Bete Co., Inc. What Everyone Should Know About the Quality of Drinking Water. Greenfield, Mass., 1977.

Consumer Forum Plus: Changing Values: Where Are We Going? 1980. A packet of four pamphlets and the magazine Forum, $5.00, J.C. Penney Co., 1301 Ave. of the Americas, New York, NY 10019. These materials are distributed free by local J.C. Penney store managers to educators. These materials touch on a variety of significant topics that teen-age consumers should be aware of.

Florida Department of Environmental Regulation. Drinking Water. Twin Towers, 2600 Blair Stone Road, Tallahassee, Florida, 32301.

Florida Department of Environmental Regulation. Nonpoint Source Pollution. Twin Towers, 2600 Blair Stone Road, Tallahassee, Florida, 32301.

Florida Department of Environmental Regulation. Permitting. Twin Towers, 2600 Blair Stone Road, Tallahassee, Florida, 32301.

Florida Department of Environmental Regulation. Wetlands. Twin Towers, 2600 Blair Stone Road, Tallahassee, Florida, 32301.

National Water Well Association. Ground Water Pollution Control. 500 West Wilson Bridge Road, Suite 135, Worthington, Ohio, 43085.

Passive Design Ideas for the Energy Conscious Consumer. National Solar Heating and Cooling Information Center, P.O. Box 1607, Rockville, MD, 20850

Tips for Energy Savers. "Tips" Distribution, U.S. Department of Energy, Office of Administrative Services, Washington, D.C., 20545.

United States Environmental Protection Agency. Acid Rain. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402 (#055-000-00198-7).

United States Enviornmental Protection Agency, EPA Journal Reprint: State of the Environment. 6 (1), Jan., 1980. Superintendent of Documents, Government Printing Office, Washington, D.C., 20402.

United States Environmental Protection Agency. Is your Drinking Water Safe? Office of Public Affairs (A-107), Washington, D.C., 20460, March, 1977.

United States Environmental Protection Agency. Water: A Resource You Can Help Restore. National Recreation and Park Association, Arlington, Virginia and Design Communication Collaborative, Washington, D.C.

5) Articles

Elgin, Duane and Mitchell, Arnold. Voluntary Simplicity. The Co-Evolution Quarterly, Summer, 1977, 4-19.

Gregg, Richard. Voluntary Simplicity. The Co-Evolution Quarterly, Summer, 1977, 20-27.

6) Composite Listing of Voluntary Simplicity-Related Materials

Escambia County School District. A Guide to Resources for Family Living and Child Development. Myrtle Grove Instructional Center, 5402 Lillian Highway, Pensacola, Florida, 32506, 1979.

7) Other Teaching Materials

Clinard, L.A., et al. Energy Guide for Secondary Home Economics Classes. Energy, Environment and Resources Center, The University of Tennessee, Knoxville, Tennessee, 37916, 1980.

Energy and the Florida Consumer. Florida Public Service Commission, 101 E. Gaines Sreet, Tallahassee, Florida, 32301.

Florida Residential Energy Audit Workbook. Governor's Energy Office, 301 Bryant Building, Tallahassee, Florida, 32301.

Connections: A Curriculum in Appropriate Technology for the Fifth and Sixth Grades. National Center for Appropriate Technology, Box 3838, Butte, Montana, 59701.$5.00

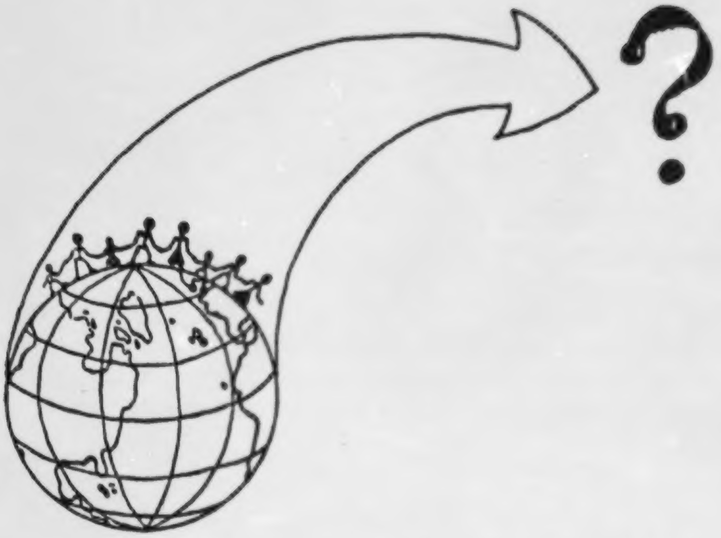
This is an excellent sourcebook of ready-to-use lessons and activities in appropriate technology. Includes objectives, background information, illustrations, and quizzes.

Home Economics Curriculum Sampler. Selected by: David E. La Hart, Florida Solar Energy Center, 300 State Road 401, Cape Canaveral, Florida 32920

This publication contains selected curriculum units which include objectives and activities for specific topics.

Low Energy Technology. Department of Agricultural and Extension Education, University of Florida, Gainesville.

This is a series of seven learning modules which include: Single Family Housing, Multiple Family Homes and Mobile Homes; Insulation; Lighting; Home Energy Usage and Conservation; Electrical Energy Usage; Attitudes; and General Energy Concepts.



INTEGRATING VOLUNTARY SIMPLICITY OF LIFESTYLE INTO FAMILY RELATIONS

VOLUNTARY SIMPLICITY
IN
FAMILY RELATIONS
OVERALL AND ACTIVITY OBJECTIVES

OVERALL OBJECTIVES	ACTIVITY OBJECTIVES	ACTIVITY
Upon completion of this unit, participants will be able to:		
1) Define the concept Voluntary Simplicity		
	1a) List some lifestyle practices that are examples of Voluntary Simplicity	3
	1b) Define the terms associated with the meaning of Voluntary Simplicity of Lifestyle	4
2) Identify some of his/her goals, noting those which are compatible with Voluntary Simplicity, and propose some ways of reaching those goals.		
	2a) Use their imagination to think about their lives in the future	10, 12
3) List reasons why it is necessary to practice conservation attitudes about energy and resources as they affect each person's lifestyle.		
	3a) Discuss the possible effects on the families of the future if conservation is not practiced .	13
	3b) Define "energy demand" and discuss how some common household electrical appliances influence lifestyles	14

OVERALL OBJECTIVES	ACTIVITY OBJECTIVES	ACTIVITY
4) Discuss the energy, resource, and economics advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.		
	4a) Discuss his/her family's energy-related values and feelings about conserving resources.	16
	4b) Explain the difference between miles per gallon (MPG) and passenger miles per gallon (PMPG).	17
	4c) Calculate passenger miles per gallon for various vehicles carrying different loads.	17
	4d) List some advantages of urban mass transit systems and predict some trends for these systems and for the single-passenger automobile	17
5) Identify the personal reward and value in making the choice to seriously practice simplifying one's lifestyle.		
	5a) Design and participate in their own recycling projects	18
	5b) Identify their existing family relationships and family types and explain their position in their family system.	20
	5c) Describe the importance of giving of oneself to the family of man.	22
	5d) Describe the support and security from living or associating closely with a group of people who care for each other	23

OVERALL OBJECTIVES	ACTIVITY OBJECTIVES	ACTIVITY
	5e) Discuss ways that the students can have an effect on these problems. Explain how these activities make the students feel about themselves	11
6) Identify and discuss creative solutions to lifestyle problems related to energy, resources, and economics		
	6a) To become aware of alternative solutions to the challenges of both our physical and social environment.	1
	6b) Demonstrate that people often know more than they think they know about a given subject.	2
	6c) Prepare media appropriate for informing others about problems involving energy, economics, and resources	11
	6d) Write creative solutions to problems caused by changes that are taking place in families and in society.	19
	6e) Identify specific ways in which families can become better managers of home energy consumption	15
	6f) Apply knowledge of community support systems to single parent families and families having older relatives.	21

Integrating Voluntary Simplicity into Family Relations In The NEW CURRICULUM FRAMEWORK FOR HOME ECONOMICS IN FLORIDA

The topics on the left are mentioned in the Family Living unit on Voluntary Simplicity. Corresponding number and letter notations, on the right, suggest the most appropriate place the topic will fit into the outlined courses presented in The New Curriculum Framework For Home Economics In Florida.

Topic	Part	Page	Concept No.
Interpersonal Relationships	II	22	2C
Life Style Variation	II	22	3C
	II	38	4.0
Social Issues	II	22	3E
Self Understanding	II	38	1.0
Relationships	II	38	3.0
Housing	II	38	5.0
	II	38	8D
Multiple Roles	II	38	6C
	II	38	8F

GLOSSARY

To the Teacher: The glossary is provided for two purposes. First, you can use it as a preliminary learning activity in itself, to familiarize yourself and your class with relevant terminology before starting the unit. Second, you can use it as a ready reference for vocabulary words encountered in the unit background information and activities. In either case, copies can be xeroxed for student use.

Active Solar Energy: use of the energy of the sun which requires electrical power to operate pumps or fans to move and store air or water which has been heated by the sun.

Conservation: the care or preservation of natural resources by wise use or management.

Energy: the capacity to do work; the power available to make something move.

Extended Family: a family composed of one husband, one wife, their parents and their children, all living in the same household.

Family: a group of individuals related by blood or marriage, who share a history and a future.

Fossil Fuels: naturally occurring fuels such as petroleum, coal, and natural gas, formed from the remains of prehistoric organisms.

Lifestyle: a person's (or family's) preferred approach to living, including moral attitudes, preferred entertainment, living arrangements, style of dress and occupational choice.

Non-renewable Resources: natural products like petroleum, coal and other fossil fuels which take a very long time for nature to form and which, once used up, cannot be replaced.

Nuclear Family: a family group composed of one husband, one wife and their children, living in the same household.

Passive Solar Energy: use of the energy of the sun without mechanical devices; an example is a regular window which is placed in such a way as to let in natural breezes in summer and the heat of the sun in winter.

Per Capita: per person. The literal translation means "Per head".

Recycling: the re-use of manufactured materials

Resource: a source of supply of something that is held in reserve; the estimated total quantity of something like minerals in the ground.

Single-parent Family: a family group composed of one parent and his/her children living in the same household.

Solar Energy: that energy which directly results from the heat or light produced by the sun's rays.

Traditional Lifestyle: one's preferred approach to living which is based on the way most people have chosen to live in the past.

Voluntary Simplicity: a lifestyle in which individuals choose to live more simply, in consideration of the limited nature of the world's resources and with concern for the quality of life. This includes recycling, home production of foods, conservation of nature and energy, and an emphasis on sharing companionship and skills.

Wattage: power as measured in watts. The amount of power required to operate an electrical appliance or device.

Activity 12 Futuribles

Overall Objective

Identify some of his/her future goals, noting those which are compatible with Voluntary Simplicity and propose some ways of reaching these Voluntary Simplicity-related goals.

Activity Objective

Use their imagination to think about what life might be like in the future.

Directions:

Futuribles is a game sold by Cokesbury Service Department, P.O. Box 840, Nashville, Tenn. 37202 for $9.45.

It consists of 288 playing cards set up like:

Family 3.4
Independence

FAMILY/SEX
Increasing female independence from childbearing and childrearing

Water 11.12
Systems

NATURAL RESOURCES
Development of new water systems -- desalination, underground sources, long-distance diversion, improved recycling.

Cards are organized by these key words:

Communication
Energy
Family/Sex
Food
Health/Bio-engineering
Housing/Settlements
Human Experience
International Relations
Law/Crime/Justice
Learning
Natural Resources
Politics/Government
Population
Production/Consumption
Religion
Society/Culture
Space
Transportation
Work/Income/Leisure

Many games can be played by any number of players. You will need to vary your plan for the game, the rules and the groupings of persons according to the size of your group. Though one of the chief values is in the interaction among several players, 2 or 3 persons can play with great profit.

Each player receives 7 cards. Play begins when a player chooses a card, reads it aloud, places it face up in the center of the table, and talks with the group about it. A player may pass on any round. After playing each player draws a card from the stack so as to always have 7 cards. You may have each player choose the card which he/she believes is most likey and least likely to occur and discuss the reasons for their choice.

A class or teacher might like to set up their own deck of cards, based on their own study of the future, and invent games instead of purchasing this one.

Activity 13 Life in the Future

Overall Objective

List reasons why it is necessary to practice conservation attitudes about energy and resources as they affect each person's lifestyle.

Activity Objective

Discuss the possible effects on the families of the future if conservation is not practiced.

Directions:

Ask the class to think about the future in terms of such aspects as ....

1. increased communications through home televised phones, home computers, etc....
2. metric system in wide use around the world....
3. English language accepted all over the world....
4. standard of living changed....
5. changes in the relative time spent at work and at leisure....
6. longer life span....
7. better educated people....
8. increased cost of coal, oil, and gas....
9. greater use of open lands for roads, industry, houses....
10. persistance of sex and age discrimination ....
11. increased numbers of people in the "Sunbelt"....
12. increased acid rain from factories and pollution of the air....

Discuss what the possible effects of these changes might be on the family, taken either separately or in combinations which the teacher may select.

Activity 14: Electrical Energy Demand and Lifestyles

OVERALL OBJECTIVE

List reasons why it is necessary to practice conservation attitudes about energy and resources as they affect each person's lifestyle.

ACTIVITY OBJECTIVE

Define "energy demand" and discuss how some common household electrical appliances influence lifestyles.

Directions: This activity contains background information which you might hand out to your students as well as a cover letter and form for parents to complete. The questions which follow could be used as:

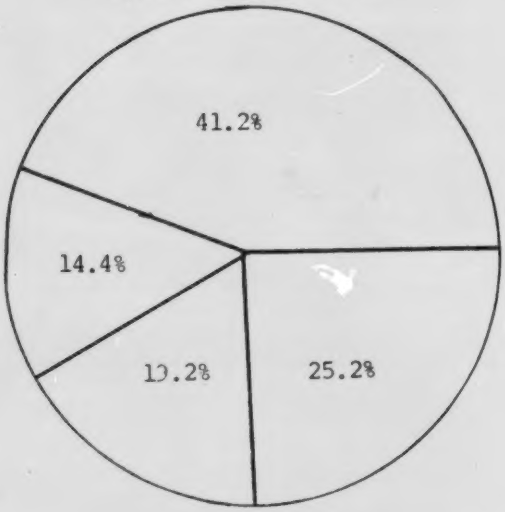
a) homework
b) debate topics
c) class discussion

Background Information

Energy Use: Problems We Are Facing

Figure 1*

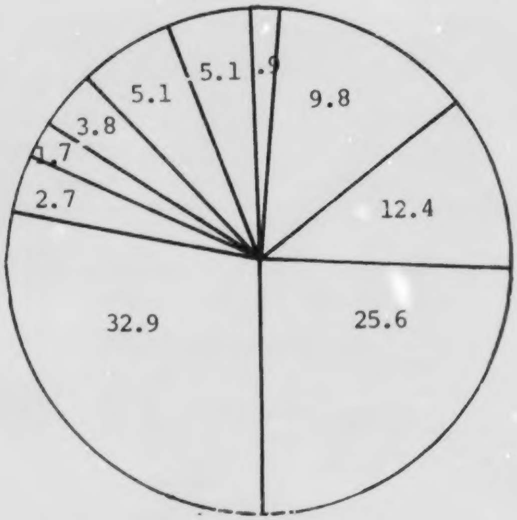
In the United States



41.2%	Industrial
25.2%	Transportation
19.2%	Residential
14.4%	Commercial

Figure 2**

State of Florida



32.9%	Air Conditioning
25.6%	Heating Water
12.4%	Refrigeration and Freezing
9.8%	Space Heating
5.1%	Cooking
3.8%	Clothes Washing and Drying
2.7%	Other
1.7%	Television
.9%	Dish Washing

Over 76% of the energy we use in this country comes from non-renewable fossil fuels. Scientists estimate that at the present rate of use, we have only 35 years of petroleum left and 20 years of natural gas.

This is not a problem confined to our country. It is a world-wide problem. But...in the United States we consume more energy per capita than other countries.

* Joyce Nies Richardson. "Energy Conservation in the Home -- You Can Make a Difference". Vocational Agriculture Service, College of Agriculture, University of Illinois, Urbana, Illinois.

**State of Florida Department of Administration. State Energy Office. Forecasts of Energy Consumption in Florida, June 1978. Florida Statistical Abstract. 1978, p. 358.

Activity:

Have the students complete the "Lifestyle Survey Form", which has been developed for this activity. Tally class results and make these available to the students. The "Lifestyle Survey Form" can also be used with family or community members.

After students and their parents complete the "Lifestyle Survey Form", students should give consideration to the following questions:

1. What do the terms "energy demand", "lifestyles", "standard of living", and "quality of life" mean?

2. How many electrical items are there in your homes and which ones, if any, would you/your parents be willing to give up? Can the "good things" of life, associated with energy, be obtained in other ways? With considerably less energy? Would such a change cost more or less?

3. To what extent do you/your parents value material things? Which are highly important and which are not terribly important?

4. How do your feelings toward material things differ from those of your parents?

5. Is there some minimal level of energy consumption to which every individual has a right? If so, how would you define it?

6. Does the government have any right to determine how or for what purpose the individual uses the energy available to him? On the other hand, does the government have a right to force individuals to give up land for a coal mine or power plant or transmission line or waste disposal site?

* From "Ideas and Activities for Teaching Energy Conservation", Grades 7-12. The University of Tennessee Environmental Center; Knoxville, Tennessee; 1977.

Alternative Activity:

Invite a representative of a utility company which does energy audits, or a representative of the Governor's Energy Office (904-488-6764 in Tallahassee) to come to class to discuss energy conservation.

To Parents:

Enclosed is a copy of the lifestyle survey form which we have asked your son/daughter to complete with your participation. The objective of this exercise is to help the student gain an understanding of energy demand and some common household electrical items which influence lifestyles.

Thank you for your cooperation.

____
(Teacher's signature)

____
(Parent's signature)

LIFESTYLE SURVEY FORM

Name: ____________________

Date: ____________________

Place an X in the column which best describes your feeling about giving up a particular item.

ELECTRICAL APPLIANCE OR ITEM*	Do Not Have	Very Easily	With Some Difficulty	With Great Difficulty	Impossible
Radio					
Stereo					
Air Conditioning (at home)					
Air Conditioning (at work)					
Electric fan					
Clock					
Freezer					
Typewriter					
Copy Machine					
Water Heater					
Power Tools					
Refrigerator					
Iron					
Dishwasher					
Electric Mixer					
Doorbell					
Electric Stove					
Hair Dryer					
Elevator					
Toaster					
Electric Blanket					
Garbage Disposal					
Blender					
Lights					
Clothes Washer					
Electric Guitar					
Telephone					
Sewing Machine					
Trashmasher					
Electric Curlers					
Color TV					
B/W TV					
Electric Toothbrush					
Clothes Dryer					

*Add any other items you may have in your home.

Activity 15: Home Energy Checklist*

Overall Objective	Activity Objective
Identify and discuss creative solutions to lifestyle problems related to energy, resources, and economics.	Identify specific ways ih which families can become better managers of home energy consumption.

Directions: Energy used in the home is really a family affair. Students, with the participation of parents and siblings should be told to respond to the State of Florida's energy checklist. Copies of the checklist are attached.

Upon completion, the class should discuss:

1) The feelings associated with engaging in this activity with your parents and siblings.
2) Was the family able to come to the conseusus?
3) How were family decisions made?
4) Did you (the student) feel that you had input into the family decision?
5) What energy-related changes did the family decide to make?

The teacher may want to show the class examples of weatherstripping, caulking guns, shower restrictors, etc. to make the lesson more meaningful. Even a plastic bag hung from a clothes hanger over the door frame of a closed door can illustrate a draft of air.

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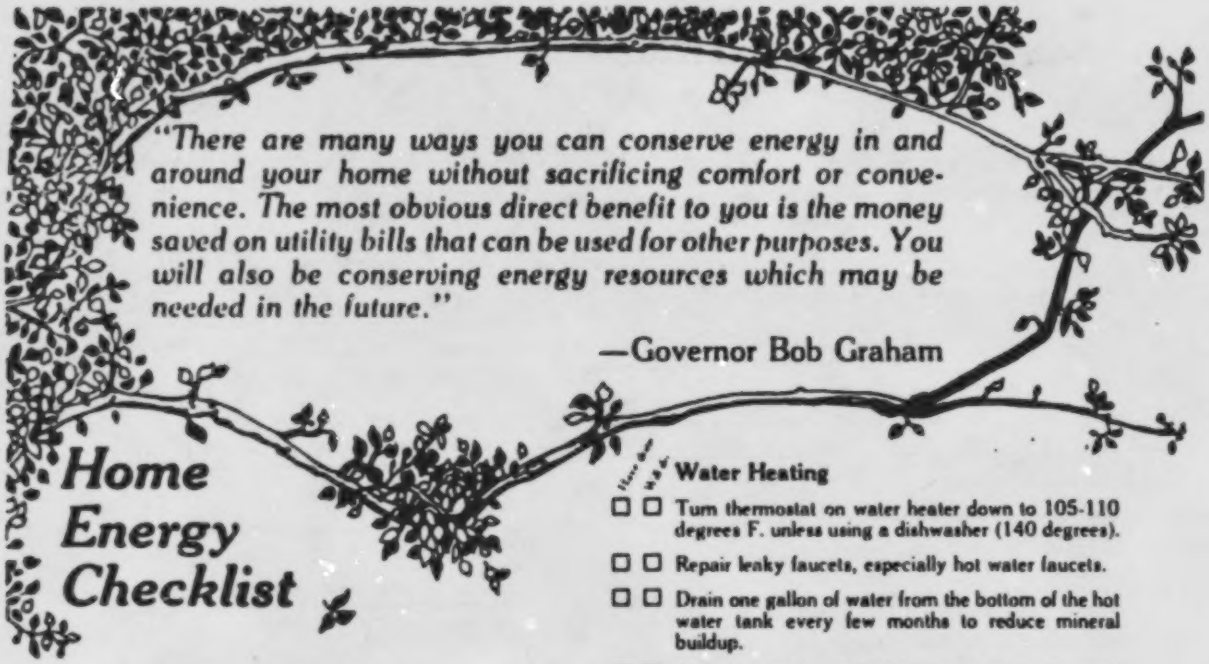
* State of Florida, Office of the Governor, Governor's Energy Office.



"There are many ways you can conserve energy in and around your home without sacrificing comfort or convenience. The most obvious direct benefit to you is the money saved on utility bills that can be used for other purposes. You will also be conserving energy resources which may be needed in the future."

—Governor Bob Graham

Home Energy Checklist

Begin today to develop an energy management plan for your home. **First,** check to see how good an energy manager you are now. **Second,** if you are not doing so, keep a record of how much energy you use each month—cubic feet (cf) of gas, kilowatt-hours (Kwh) of electricity, or gallons of LP gas. **Third,** plan and list the energy saving practices you will use for the next year.

This checklist will help you to identify ways you can become a better energy manager.

Checklist adapted from "Energy Management Checklist For the Home", Cooperative Extension Service, Mississippi State University. Used with permission.

Lighting

☐ ☐ Turn off unnecessary lights, indoors and out.

☐ ☐ Keep lighting fixtures clean.

☐ ☐ Use bulbs with lower wattage in halls, stairways, and other areas of general illumination.

☐ ☐ Use a single, higher wattage bulb instead of several lower wattage bulbs.

☐ ☐ Install fluorescent lighting to get the maximum amount of light from the amount of electricity used.

Water Heating

☐ ☐ Turn thermostat on water heater down to 105-110 degrees F. unless using a dishwasher (140 degrees).

☐ ☐ Repair leaky faucets, especially hot water faucets.

☐ ☐ Drain one gallon of water from the bottom of the hot water tank every few months to reduce mineral buildup.

☐ ☐ Scrape and rinse dirty dishes and accumulate until dishwasher is filled before washing. When washing dishes by hand, wash them only once a day.

☐ ☐ Do not leave hot water running continuously while washing or rinsing dishes.

☐ ☐ Wash only full loads of laundry.

☐ ☐ Always rinse laundry in cold water; use heated water for the washing cycle only.

☐ ☐ Use water only as hot as necessary for adequate soil removal and sanitation.

☐ ☐ Sort and pretreat garments to obtain satisfactory results with one washing.

☐ ☐ Minimize the amount of hot water used in bathing; less water usually is used for short showers than for tub baths.

☐ ☐ Do not leave water running while shaving, brushing teeth, etc.

☐ ☐ Turn faucets off promptly after use.

☐ ☐ Avoid running hot water into pipes for minor uses, such as washing hands, especially when the water heater is distant from the faucet. Make a habit of using cold water or walking to a faucet closer to the heater.

☐ ☐ Reduce the amount of hot water used for showering by installing a flow restrictor in the showerhead.

☐ ☐ Install an insulating jacket around the water heater.

☐ ☐ Insulate exposed hot water pipes.

Copies of this list are available from the Governor's Energy Office
The Capitol
Tallahassee, Florida 32301
(904) 488-2475

Appliances

☐ ☐ Line dry when practical, rather than using the dryer.

☐ ☐ Use the dryer efficiently; don't overdry; avoid drying only a few items at a time; clean the lint trap after every load.

☐ ☐ Remove items as soon as dryer stops to avoid unnecessary wrinkling that will require pressing.

☐ ☐ Vent dryer to exterior to prevent heat and moisture buildup in the house.

☐ ☐ When using the oven, use it to capacity.

☐ ☐ Preheat oven only when necessary; many foods do not require a preheated oven. If you must preheat, place foods to be baked into oven as soon as correct temperature is reached.

☐ ☐ Avoid opening oven door when oven is in use.

☐ ☐ Use tight fitting lids on pots and pans when appropriate.

☐ ☐ Use pots and pans which fit the burner unit.

☐ ☐ Reduce heat to the lowest temperature necessary when using surface burner units.

☐ ☐ Turn off oven and surface burner units promptly when food is cooked. Electric burners can be turned off before food is completely done.

☐ ☐ Use small appliances for cooking, baking and toasting. They are usually more efficient for small jobs than ranges.

☐ ☐ Avoid opening refrigerator or freezer door or holding it open unnecessarily.

☐ ☐ Keep grills and evaporator coils on refrigerator clean.

☐ ☐ Defrost refrigerator when frost buildup is ¼-inch thick.

☐ ☐ If cold air is leaking around refrigerator or freezer door (try pulling a dollar bill out after closing door on it), have door adjusted or gasket replaced.

☐ ☐ Turn off, empty, clean and leave refrigerator open when taking an extended vacation.

☐ ☐ Locate the refrigerator and freezer away from heat sources (range, heater, sunlight).

☐ ☐ Empty or replace the vacuum cleaner bag frequently for efficient operation.

☐ ☐ Eliminate unnecessary vacuuming and polishing; use hand equipment where possible.

☐ ☐ Turn off TV, radio or stereo when no one is watching or listening.

☐ ☐ Disconnect (or use "vacation setting") on instant-on TV when you are not going to be using it regularly.

Building Envelope

☐ ☐ Weatherstrip doors and windows. Fix broken or cracked windows.

☐ ☐ Caulk cracks, foundation sill, around windows, where pipes enter the house, and where different materials, such as concrete and wood, meet.

☐ ☐ Install ceiling insulation — R-19 minimum.

☐ ☐ Install wall insulation — R-9 minimum.

☐ ☐ Install insulation in crawl space — R-11 minimum.

☐ ☐ Make sure the attic is well ventilated (1 sq. ft. of vent/150 sq. ft. of attic); outlet vents should be 3 ft. higher than inlet vents.

Have done Will do

Windows

☐ ☐ Install insulating drapes or interior shades. Close drapes and shades during the day in summer, during the night in winter.

☐ ☐ In the summer, close windows during the day when it is hotter outside than in; open in the evening if the temperature outside is cooler than inside.

☐ ☐ Plant fast-growing trees to shade the house.

☐ ☐ Use awnings, sunscreens or other exterior shading for windows. When building, plan a wide roof overhang to shade windows.

☐ ☐ Avoid large expanses of window when planning to build a mechanically conditioned home. Where glass is used, make maximum use of passive solar design techniques.

Have done Will do

Space Heating and Cooling

☐ ☐ Reduce daytime home heating temperature in winter to 65 degrees F. or lower.

☐ ☐ Reduce nighttime home heating temperature in winter 10 degrees F. or more.

☐ ☐ Increase temperature setting for summer air conditioning to 78 degrees F. or higher.

☐ ☐ Turn off heating and cooling systems when away from home for long periods of time, taking necessary precautions for mildew or freezing conditions.

☐ ☐ Set air conditioning unit so that it recirculates cool air rather than pulling in warmer outside air.

☐ ☐ Close off vents and close the doors to unused rooms and closets.

☐ ☐ Use kitchen and bathroom exhaust fans only when necessary.

☐ ☐ Use window and attic fans for cooling during summer when outside temperature is below inside temperature.

☐ ☐ Shade air conditioner compressor unit. Allow room for air to circulate around the compressor unit.

☐ ☐ If you have a fireplace, close the damper (or glass doors, if you have them) when the fireplace is not in use.

☐ ☐ When using your fireplace, turn the room thermostat way down and close the room off. Fireplaces that use outside air and have a glass door and air circulation pipes are much more efficient.

☐ ☐ Keep air filters clean to make it easier for heating and cooling equipment to do its job.

☐ ☐ Maintain heating and cooling equipment in good operating condition.

☐ ☐ Repair leaks and insulate heating and cooling ducts in spaces not heated or cooled.

☐ ☐ Install clock-thermostats or temperature setback devices on heating and air conditioning systems.

☐ ☐ Select an energy efficient air conditioning unit of the proper size for the space to be cooled. It is better to buy a slightly undersized unit than an oversized one.

This public document was promulgated by the Governor's Energy Office, using U.S. Department of Energy grant funds, at a cost of $750, or 3¢ per copy. Its purpose is to provide energy information to the citizens of Florida as required by s. 377.703(3)(e), F.S.

Activity 16: Energy Conservation in the Home

Overall Objective

Discuss the energy, resource, and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.

Activity Objective

Discuss his/her family's energy-related values and feelings about conserving resources.

Directions: This activity should help students to better understand their energy-related values. After handing them the Wattage Chart, students would be asked to list 10 electrical appliances in their homes. Then you could use the questions for:

a) homework
b) debate ideas
c) class discussions

WATTAGE CHART*

Food Preparation/Preservation	Est. KWH Consumed Annually
Refrigerator	
Standard 12 cu. ft.	728
Frostless 12 cu. ft.	1217
Freezer	
Standard 15 cu. ft.	1195
Frostless 15 cu. ft.	1761
Refrigerator/Freezer (side by side)	
Standard 14 cu. ft.	1137
Frostless 14 cu. ft.	1829
Range	1175
Dishwasher	363
Microwave Oven	300
Frying Pan	186
Iron	144
Toaster	39
Blender	15
Mixer	13
Carving Knife	8
Laundry	
Water Heater	4219
Washing Machine	103
Clothes Dryer	993
Recreation	
Color Television	502
Black and White Television	362
Radio/Record Player	109
Miscellaneous	
Air Conditioner	1389
Window Fan	170
Clock	17
Hair Dryer	14
Sewing Machine	11
Toothbrush	0.5

* The Electrical Energy Association prepared the above wattage chart. This wattage chart gives the approximate power (KWH consumed by home appliances) used for one year under normal conditions.

1. Examine the Wattage Chart and answer these questions. Which appliances use the most energy? Which appliances use the least energy?

2. Would you be willing to give up three appliances to save energy? Why?

3. How much do the three appliances which you would be willing to give up use in one year?

Appliance	Wattage
1.	
2.	
3.	
Total	

4. Which three appliances would you be least willing to give up? Why?

5. How would you save energy when buying these appliances?

6. How could you save energy when using these appliances?

7. Which items would you eliminate to save 500 KWH yearly?

Appliance	Wattage
1.	
2.	
3.	
4.	
5.	
Total	

Activity 17: Getting There *

Overall Objective

Discuss the energy, resource, and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.

Activity Objectives

Calculate passenger miles per gallon for various vehicles carrying different loads.
Explain the difference between miles per gallon (m.p.g.) and passenger miles per gallon (p.m.p.g.). List some advantages of urban mass transit systems and predict some trends for these systems and the single-passenger automobile.

Directions: . We begin this lesson with a topic that has wide appeal for students -- making a wish come true. Here the student can pick any car he or she wishes, the zingier the better, with money no object. It is later in the progress of the lesson that we let the student see the miles per gallon rate for his dream car. Since our game rule says he or she must be able to afford to run his dream car, some revised thinking may be in store. Facts drawn from charts and tables will help students draw more exact conclusions and sharpen their judgement.

Target Audience: Home Economics, Social Studies, or Science

Materials: Dittoed class sets of student activity materials

Time Allotment: One - two class periods

Teaching Strategies: Begin the lesson with a topic many students know best -- the family car. You may wish to introduce a lively debate with questions similar to these:

Suppose you could buy any new car or van you like. Money is no object. What kind would you pick? Keep one thing in mind, however. After you "buy" your dream car, you have to be able to pay for the gas, oil, and all repairs. Have students make their selections. They may call out their car, or you may wish to have them write them on the board or on paper.

"What features on an auto are the most important to you?" Have students list these as general topics, then you may call for a vote of agreement on each one. How many of you think this feature is important? Take count, then proceed to the next feature. Students will probably mention some or all of the following:

___Good-looking paint Job
___Sporty lines
___Whitewalls
___Air conditioning
___Good gas mileage
___Powerful engine
___Convertible
___Big size
___Four-speed transmission
___Designer interiors (Denim upholstery, customized vans, Pucci, etc.)
___Vinyl top
___Engine reliability

*Interdisciplinary Student/Teacher Materials in Energy, the Environment and the Economy. For Transportation and the City, Grades 8 and 9. U.S. Department of Energy. National Science Teachers Association 1742 Connecticut Ave., N.W. Washington, D.C. 20009

Suggest to the students that they think about their "dream" car again. Ask, "Why did you pick this car? What would you use it for?" As students think about these questions and make suggestions, distribute the chart showing the names of 1981 cars, and ask students to find their "dream" car on the list. (If they cannot find it, have them choose a car from the list that is a good second choice for them.)

Have students read the heading before answering the following questions:

What is the gas mileage rate for your car? If new regulations came out saying that cars must get 20 miles to the gallon, does your car qualify? How much would gasoline cost you each week for your car, if gasoline costs $1.25 a gallon, and you travel 250 miles per week? Have students figure their costs.

Suppose your car gets 20 MPG. Divide the number of miles traveled - (250) by 20. This result will be the number of gallons used. Then multiply that figure by $1.25 (250 divided by 20 multiplied by $1.25 = $15.63). What will your "dream" car gasoline costs be?

Conclude this part of the lesson by suggesting the following question: "Can you afford your dream car?" Many students will be reluctant to give up their dream. Use this opportunity to introduce students to a consideration of alternate transportation systems. Should we begin to think of a car as transportation rather than a "dream machine?" Why are there so few mass transportation systems in American cities? What are some advantages in using buses, commuter trains, and airplanes? How might more automobiles cause more city problems?

Extended Learning Activities

Either in conjunction with the above activity, or as a separate activity, have students consider the concept of passenger miles per gallon. This is a term that refers to the number of people that can be carried by an amount of fuel for one mile. PMPG is figured by dividing the number of people in the carrier into the amount of fuel used by the carrier. Once you have helped the students understand this, you can then lead them to consider the relationship between single-passenger cars and efficiency.

Distribute the tables (1 and 2). Ask the students, "Which is the most efficient type of transportation? The least efficient? How can we determine the efficiency?" (Keep the focus on efficiency by asking: "Would the same amount of gasoline used to carry one individual in the average commuting automobile carry at least 10 persons the same distance in a bus, train, or jet airplane?)

Have students complete the chart. Then answer some or all of the following questions.

Table I 1. Which type of urban transportation listed on Table I gets the most miles from each gallon of gasoline? (Automobile.)

Table II 2. Which vehicle gets the most miles per gallon (MPG)? (Automobile.)
3. Which uses the most fuel for a 20 mile trip into the city? (Train.)
4. Which uses the most fuel per person for this trip? (Van with one person.)
5. Which uses the least amount of fuel per person for this trip? (Bus with 40 persons.)
6. If the 1000 people who rode on the commuter train drove a car to the city instead, how much additional fuel would be used? (1000 persons would use 1110 gallons of gasoline, compared to 200 gallons, so an additional 910 gallons would be used.)
7. How much fuel is saved by having 40 people ride a bus instead of using 20 cars with two people in each car? (22.2 gallons instead of 6.1 gallons -- so 16.1 gallons of fuel are saved.)

Write a summary paragraph for each question below.

1. Are mass transit systems, like buses and commuter trains, always more efficient than cars? Explain. (Mass transit types of transportation are energy efficient when they are running with full passenger loads.)

2. Suppose the mayor of your city appointed you as the new director of mass transit systems. He or she wants your ideas on the serious problem of too many cars in the city and the underused public transportation facilities. What would you say in a letter to the mayor? (Encouraging people to use mass transit facilities continues to be very difficult. In theory, people should turn to mass transit facilities because they are more

energy-saving. In fact, people will not use them until they can save time and money, and have greater convenience than they do with the car. There are some things that city governments do today to encourage higher use of mass transit facilities, but they are only partly working. Some ways are by raising parking fees, reducing the number of parking lots, partial subsidizing of bus and train costs, and supplying fleets of minibuses. These provide the kind of door-to-door convenience that attracts passengers and discourages the use of the automobile.)

Activity 17: Getting There: 1981 Cars

YOUR DREAM MACHINE
Student Activity Sheet

	Model	Manufacturer	MPG*
Two Seats			
	Corvette	GM-Chevrolet	15
	Datsun 280ZX	Nissan	21
	Ferrari 308	Ferrari	11
	Porsche 911	Porsche	21
	Triumph TR	Triumph	24
Minicompact Cars			
	Civic	Honda	32
	Renault LE Car	Renault	29
Subcompact			
	Camaro	GM-Chevrolet	20
	Omni	Chrysler-Dodge	30
	Strada	Fiat	28
	Escort	Ford	30
	Jaguar XJ	Jaguar	15
	Mercedes 240-D (Diesel)	Dailler-Benz	29
	Horizon	Chrysler-Phymouth	30
Mid-Sized Cars			
	Riviera	GM-Buick	17
	Eldorado	GM-Cadillac	17
	Citation	GM-Chevrolet	24
	Monte Carlo	GM-Chevrolet	19
	Fairmont	Ford	23
	Thunderbird	Ford	18
	Cougar	Ford	23
	Reliant	Chrysler-Plymouth	25
	Grand Prix	GM-Pontiac	21
Large Cars			
	Electra	GM-Buick	18
	Brougham	GM-Cadillac	18
	Impala	GM-Chevrolet	19
	New Yorker	Chrysler-Plymouth	17
	LTD	Ford	18
	Continental Mark VI	Ford	16
	Grand Fury	Chrysler-Plymouth	17

*Department of Energy and the Environmental Protection Agency, 1981 Gas Mileage Guide, U.S. Government Printing Office, February, 1981.

Model	Manufacturer	MPG
Vans		
Chevy Van V-8	GM-Chevrolet	17
Dodge Van V-8	Chrysler-Dodge	15
Ford Van V-8	Ford	14
Vanagon V-4	Volkswagen	17
Small Station Wagon		
210 Wagon	Datsun-Nissan	32
Escort Wagon	Ford	27
Corolla Wagon	Toyota	28
Dasher Wagon	Volkswagon	36
Mid-Size Station Wagons		
Buick Century Wagon	GM-Buick	21
Malibu	GM-Chevrolet	20
Aries	Chrysler-Dodge	24
Fairmont	Ford	23
Large Station Wagons		
Impala Wagon	GM-Chevrolet	16
LTD Wagon	Ford	16
Small Pickup Trucks		
LUV 2WD	GM-Chevrolet	26
LUV 4WD	GM-Chevrolet	22
Datsun Pickup 2WD	Nissan	27
Datsun Pickup 4WD	Nissan	21
Courier 2WD	Ford	27
Arrow 2WD	Plymoth	23
Volkswagon Pickup 2WD	Volkswagon	25
Standard Pickup Trucks		
Chevy Pickup 2WD	GM-Chevrolet	21
Chevy Pickup 4WD	GM-Chevrolet	17
Dodge Pickup 2WD	Chrysler-Dodge	18
Dodge Pickup 4WD	Chrysler-Dodge	16
Ford Pickup 2WD	Ford	21
Ford Pickup 4WD	Ford	18

Activity 17: Getting There

ANNUAL FUEL COSTS CHART
Student Activity Sheet
Based on 15,000 Miles Per Year

Est. MPG	Dollars Per Gallon 1.75	1.65	1.55	1.45	1.35	1.25	1.15
50	525	495	465	435	405	375	345
49	536	505	474	444	413	382	352
48	546	515	484	452	421	390	359
47	559	527	495	463	431	399	367
46	570	537	505	472	439	407	374
45	583	549	516	483	450	416	383
44	596	562	528	494	460	426	392
43	612	577	542	507	472	437	402
42	625	589	553	518	482	446	411
41	640	604	567	531	494	458	421
40	656	619	581	544	506	469	431
39	672	634	595	557	518	480	442
38	690	651	611	572	533	493	454
37	709	668	628	587	547	506	466
36	730	688	646	605	563	521	480
35	751	708	665	622	579	536	493
34	772	728	684	639	595	551	507
33	795	750	704	659	614	568	523
32	819	772	725	679	632	585	538
31	848	799	751	703	654	606	557
30	874	824	774	724	674	624	574
29	906	854	802	750	699	647	595
28	937	884	830	776	723	669	616
27	971	916	860	805	749	694	638
26	1011	953	895	837	780	722	664
25	1050	990	930	870	810	750	690
24	1095	1032	970	907	844	782	719
23	1142	1077	1011	946	881	816	750
22	1194	1126	1058	990	921	853	785
21	1250	1178	1107	1035	964	892	821
20	1312	1238	1162	1088	1012	938	862
19	1381	1302	1223	1144	1065	986	907
18	1460	1376	1293	1209	1126	1042	959
17	1544	1455	1367	1279	1191	1102	1014
16	1641	1547	1453	1359	1266	1172	1078
15	1751	1651	1551	1451	1351	1251	1151
14	1874	1767	1660	1553	1446	1339	1232
13	2019	1903	1788	1673	1557	1442	1327
12	2187	2062	1937	1812	1687	1562	1437
11	2386	2250	2113	1977	1841	1704	1568
10	2625	2475	2325	2175	2025	1875	1725
9	2916	2750	2583	2416	2250	2083	1916

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*Department of Energy and the Environmental Protestion Agency, 1981 Gas Mileage Guide, U.S. Government Printing Office, Washington, D.C., February, 1981.

Activity 17: Getting There

Table I

TYPES OF URBAN TRANSPORTATION	FUEL MILEAGE (AVERAGE) (MPG = Miles Per Gallon)
Automobile	18 MPG
Van	16 MPG
Bus	3.3 MPG
Commuter Train	.1 MPG
DC Jet	.25 MPG

Table II

Form of Transportation	Number of People	MPG	Fuel Needed for 20 Mile Trip (In Gallons)	Fuel Per Person (PMPG)
Car	1	18	1.11	1.11
Car	2	18	1.11	.56
Car	4	18	1.11	.28
Van	1	16	1.25	1.25
Van	2	16	1.25	
Van	8	16	1.25	
Bus	5	3.3	6.1	
Bus	20	3.3	6.1	
Bus	40	3.3	6.1	
Train	1,000	.1	200	
Airplane	100	.25	80	

Remember: Passenger miles per gallon is arrived at by dividing the number of the number of people into the amount of fuel used.

Activity 18: Recycling

Overall Objective	Activity Objective
Identify the personal reward and value in making the choice to seriously practice simplifying one's lifestyle.	Design and participate in their own recycling projects.

Directions: Students in class or in a HERO or FHA organization might explore the possiblities of various products to be recycled in their community and collectively select one. (Examples include bottles, newspapers, aluminum cans, old clothes or materials which could be re-made other clothing or household items, etc.)

When the item or product is selected, certain factors should be considered:

1. What can we do with the collected material?
2. How much can we be paid for it?
3. Will it aid the community or individuals in any way? If so, in what ways?
4. Could we make something out of the recycled materials?
5. What existing community organization (church, store, service group) might be interested in promoting an on-going project of this type?

The students (with teacher's assistance) will set up an accounting system to determine how much (number, weight, size, or whichever) material is recycled. A prize could be awarded to the most productive recycler (or a certificate of recycling!). The recycling project could involve the single classroom, or the single classroom could design the project for participation by the whole school.

Alternative Ideas:

If a recycling project already exists, have students find out:

1. Who started the project?
2. Why was the project begun?
3. How does it operate?

Students might recycle real objects by:

1. Sewing a draft dodger to put on the floor or window sill to prevent drafts, stuffing it with old hosiery, cat litter, or sand.
2. Making pot holders from old clothes.
3. Covering flower pots with scraps of cloth.

Activity 19: Interpersonal/Family Relationships: Problems We Are Facing

Overall Objective	Activity Objective
Identify and discuss creative solutions to lifestyle problems related to energy, resources and economics.	Write creative solutions to problems caused by changes that are taking place in families and in society.

Directions: This activity contains some background information which can either be duplicated and handed out to the students, or the entire activity can be conducted orally by you. As noted in the activity directions, the creative solutions can be designed either individually or in small groups.

Background Information:

Many changes are taking place in our society. Aside from the physical changes in the environment which we have already talked about, Social Changes are occurring as well. In recent years, social scientists have noted such trends as the rise in our divorce rate and the increase in mothers working outside of the home. For example, in 1960, 3 out of 10 married women worked outside of the home. In 1975, the number had risen to almost 5 out of 10 married women who worked outside of the home. These changes in the society mean that changes must also be taking place in families.

1. Can you identify changes which have taken place in your own family?

2. What might some of those changes be?

3. Can you identify any affects of these changes on your family?

Perhaps the changes taking place in society which effect families can be met with "creative alternative" solutions.* Here is an example:

SITUATION:

Lack of contact and closeness is sometimes caused by families living great distances apart. Extended families are often difficult to maintain.

CREATIVE ALTERNATIVE:

Encourage contact and interaction between family members. In addition, have extended families with non-family relations - adoptive "aunts" and "uncles". Live in community cooperatives with the elderly and the young together.

YOUR CREATIVE SOLUTION:

Now try responding to the following situations with your own creative alternatives. (May be done individually or in small groups).

1. SITUATION:

Loneliness is an important social fact - but there can be loneliness right in the midst of a family.

YOUR CREATIVE ALTERNATIVE:

*Creative Alternatives to Interpersonal Relationships. ;. 24 J. C. Penney Forum. "Is Society meeting the needs of the Family?", SPRING/SUMMER 1974.

2. SITUATION:
One of the great family tension-makers is time demands. Time for study, for work, transportation, marketing, etc. These leave few periods for family communication.

YOUR CREATIVE ALTERNATIVE:

3. SITUATION:
In many families, parents and their children share a house, but few other things in common.

YOUR CREATIVE ALTERNATIVE:

Activity 20: Family Genogram

Overall Objective

Identify the personal reward and value in making the choice to seriously practice simplifying one's lifestyle.

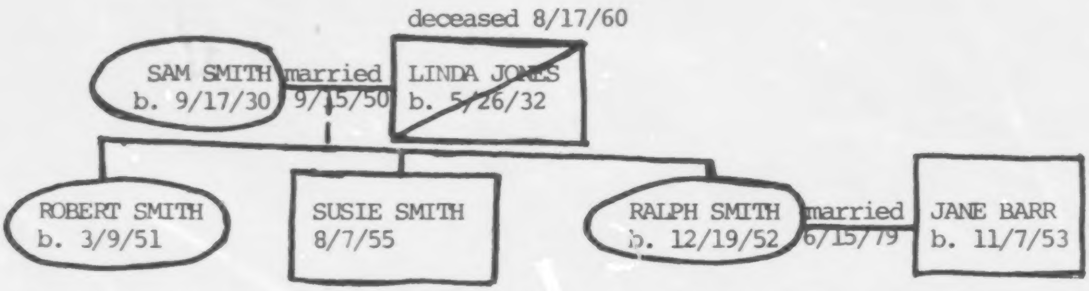
Activity Objective

Identify their existing family relationships and family types and explain their position in their family system.

Directions: Students are asked to draw a diagram of their own family system. Such a diagram should include the names, dates of birth, dates of marriage, death, divorce, etc. of all relatives about whom the student can gain information.

The students are encouraged to have parents and other relatives assist in the completion of the genogram. (NOTE: alternative symbols, styles, etc. should be encouraged, as each student will creatively diagram his/her family in different ways).

GENOGRAM EXAMPLE:



After creating their personal genograms, some or all of the following questions may be discussed in a written paragraph or two, or in small groups.

1. Based on the family definitions in the glossary (pp. 143-144) which family type does the student live in? Explain.
2. If the student's family does not fit into one of the traditional definitions in the glossary, how is it different?
3. Encourage the students to talk to their families about the information on the genogram. What additional information would they need to complete the genogram? Where could the student get this information?
4. How does the student and his/her parents feel about sharing this information about family members?
5. Does the student feel comfortable with his/her contact with family members, or are there family members which the student would like to know better and perhaps see more often?
6. Encourage the students to explore the ways in which individually, they can improve their own family relations.

Activity 21: Community Support Systems

Overall Objective
Identify and discuss creative solutions to lifestyle problems related to energy, resources, and economics.

Activity Objective
Apply knowledge of community support systems to single parent families and families having older relatives.

Directions: The following situations may be used as the basis for homework, classwork, or discussion.

Mary Rogers, aged 30 gets a divorce and receives custody of her two children; Jim, aged 3 and Jo Ella, aged 10. Jo Ella rides the school bus to school each day. Mary feels that she wants to return to her old job as a secretary, both to get needed money and to improve her state of mind.

What must Mary consider regarding the change to becoming a working single parent? Possible answers could include:

1) Money earned versus costs of transportation, child care, clothes, etc.
2) Types of child care available, as well as accessibility and quality.

In what ways could Mary simplify her lifestyle to make it easier to cope with being a single parent? Possible answers could include:

1) Find someone to carpool with, or take the bus.
2) Find roommate to share living expenses with if possible.
3) Lot's of single parents enjoy coop babysitting; it's a nice break!

Mr. & Mrs. Jones are in their 40's and both are employed in different offices in town. They have a son, John, who is a freshman in high school and a daughter, Jean, who is in sixth grade. The Jones family lives in a three bedroom house.

Mrs. Jones' mother, Mrs. Abbott, has crippling arthritis and cannot see too well. She is no longer able to cook her own meals and look after herself. Since Mrs. Jones is her only child, the Jones family decides the best solution is to bring her to their house to live.

What decisions can be made before Mrs. Abbott arrives which will make work easier and life more pleasant for this three-generation family?

Example: sleeping arrangements

What decisions must be made after Mrs. Abbot arrives? Why?

Examples: Use of a day care center as a place for Mrs. Abbott to enjoy members of her age group and eat lunch.
Use of meals-on-wheels program to provide lunch to Mrs. Abbott.
Scheduling of T.V. viewing in the evening.
Regular financial arrangement by Mrs. Abbott toward the family expenses.
Clear understanding on family use of the telephone, bathroom, and other scarce items.
Clarification of family rules regarding conservation policies regarding lights, temperature, and use of the car.

Activity 22: Giving of Oneself

Overall Objective	Activity Objective
Identify the personal reward and value in making the choice to seriously pratice simplifying one's lifestyle.	Describe the importance of giving of oneself to the family of man.

Directions: This assignment could have a due-date quite a bit later than when made, so that each student might have plenty of time to think and act, as well as record the event in a way appropriate to their needs (tape, writing, ect.).

Think of someone who means something to you in a special way. The person may be a relative, a neighbor, a friend, etc. In a real sense, that person is part of your extended family. In a sense, that person is part of what we call, "the family of man," meaning mankind.

What could you do for that person which might please them? You might think of this act of kindness as your gift to them. It need not cost anything. It could be as simple as spending awhile visiting with them, if you think they are lonely, or picking up trash in their yard, if it bothers them. Record what you did, without necessarily mentioning the person's name. Then describe their reaction and your feelings about the experience.

Activity 23: Community Building

Overall Objective
Identify the personal reward and value in making the choice to seriously pratice simplifying one's lifestyle.

Activity Objective
Describe the support and security from living or associating closely with a group of people who care for each other.

Directions: This description of how a community gets started may be duplicated for students to read. Then these questions could be used as appropriate:

1. What kinds of benefits can result for the person who takes part in these community affairs ... to the family ... to the community ... to the larger town or city of which the community is a part?
   a. block parties, dances, parades, fairs
   b. car pools
   c. buying clubs
   d. newsletters
   e. petitions or requests to government agencies or landlords offering suggestions or asking help
   f. garage sales
   h. study, craft, game groups
   i. directory of skills, advice, services in neighborhood

How a Community Gets Started*

To see how a community can actually get started, let's look at one that originated in Palo Alto, California, in November 1974. For many years Dorothy Fadiman, a housewife and mother of two, had had a vision of a community where she and her friends could be more responsible for themselves and less dependent on large impersonal corporations. She shared this vision with her friends and found that many felt the same way. They called a meeting of the parents and teachers at a small progressive elementary school nearby, and more than 50 people came.

To determine the community's needs and major areas for cooperation, they passed out interest sheets listing possible areas of cooperation. They decided to develop autonomous projects, such as cooking cooperatives, which, while serving the community, could be carried out by a nucleus of committed people.

After the interest sheets were compiled, each person who expressed interest in being an organizer met with those who had checked either the participant or worker category in a specific area. Together they made plans to implement their projects.

The community now comprises about 30 families and individuals. At first glance their homes seem typically middle-class, but they are different. The families interact with each other a great deal. Several cooking co-ops have developed, with three families in each co-op. Each family takes turns cooking one major meal a week and delivering it to the other two homes. In this way, the wives (or husbands) in each family spend less time cooking and have more time to pursue other interests. Similarly, children's afternoon play groups have been organized. The kids enjoy themselves and their parents can count on some time to themselves. A resource and skills exchange has been set up, and work days are organized at members' homes. A drama group meets once a week. A monthly "Sunday Meeting" has been started for people of all religious backgrounds for quiet and worship together. There is no dogma involved in the meetings. On the contrary, community members seek their own forms of worship from those which are most alive for the community.

Most members have joined and helped develop the Briarpatch Market, a cooperative, nonprofit grocery store, where everyone works and the food is usually better and much cheaper than in most other stores. The market helps people keep their food budgets down and builds a sense of relatedness with other community-oriented people in Palo Alto.

According to one of the members, "The community is much more flexible than the first idealistic model we envisioned. It is more exciting and more vital. It has become a living vision of a number of people and is totally based on the needs of people in the group.

*Hartsough, D. "Community" in _Taking Charge -- Personal and Political Change Through Simple Living_ by The Simple Living Collective, American Friends Service Committe, Bantam Books, San Francisco: 1977.

We are always changing as we discover new ways to meet our mutual needs." Meeting one another's needs without the exchange of money had been one of the original purposes of the community. But an even greater need has turned out to be personal contact. Good will and a willingness to help each other at home, to cook for each other, and to meet each other's needs are the glue that holds this community together. No formal commitment is necessary to join, but "the only way to get much out of it is to participate."

RESOURCE LISTING

1) Audio-Visual Materials

Children and Adults

Examines the effects that mother and father relationships have on young children. Includes topics of parental relationships and the child, expectations, and realities, the quality of the relationship, single parents, and the child and society.
(5 Filmstrips, 3 Cassettes, 1 Teacher's Guide)

Family Relationships

Focuses on the key factors and issues which affect children and family relationships. Includes the effects of family structure on the child, our modern world, money, mobility, and family crisis.
(5 Filmstrips, 3 Cassettes, 1 Teacher's Guide)

Lifestyles: Options for Living (Independent Living Series)
Maclean Hunter Learning Resources
P.O. Box 4381, Grand Central Station   Grades 11-12
New York, New York 10017   1976 $85.00
Part I: What is a Lifestyle?
Part II: Values, Goals, Decisions
Part III: Making Changes
Part IV: Decisions in Action

Challenges the viewer to imagine the future in terms of prescribed characteristics. Recognition of personal values is depicted as a critical factor in the process. Defines lifestyles in a flexible manner and gives examples. Stimulates thinking on values and future options. Presents a series of scenarios depicting people in life changes. Overview of change in American culture from past to present. Some emphasis on changing rules regarding male/female roles in society. Middle class orientation. Student spirit masters trivialize role reversal.
(4 Filmstrips, 4 Cassettes, 1 Teacher's Guide, 12 Ditto Masters)

Mothers and Fathers Series (4 sets)
Parents' Magazine Films, Inc.
52 Vanderbilt Ave.   Grades 11-12
New York, New York 10017   1977 $230.00

A cross section of psychiatrists, psychologists, and pediatricians have developed these materials which portray people of varying ethnic groups, family composition, and income levels.

Mother/Father Roles

Explores the changing roles and responsibilities of American parents. Examines topics of the parenting role, the role of provider, the role of nurturer, sex role formation, and society and roles.
(5 Filmstrips, 3 Cassettes, 1 Teacher's Guide)

Changes in the Family

Presents the impact of a changing society on the family. It includes topics of meeting parental obligations, working on relationships, reexamining roles, child care, and the need for support.
(5 Filmstrips, 3 Cassettes, 1 Teacher's Guide)

The Consumer Education Series from Butterick Publishing Company
Maclean Hunter Learning Resources
P.O. Box 4381, Grand Central Station
New York, New York 10017

#5544	Consuming our Resources: What about Tomorrow
#5628	Buy It or Do It Yourself
#5539	Setting Goals and Planning Ahead
#5547	Needs and Wants: Choices in Decision-Making

2) Books

Bergland, B. Living on a Few Acres: Yearbook of Agriculture, 1978 U.S. Department of Agriculture.

Burch, W.R. (Ed.). Readings in Ecology, Energy and Human Society: Contemporary Perspectives. Harper and Row Publishers, 1977

Callenbach, E. Living Poor With Style. New York, Bantam Books, Inc., 1972.

Center for Science in the Public Interest. 99 Ways to a Simple Lifestyle. Garden City, NY: Doubleday Publishers, 1977, 381 pp., $3.50.

Didsbury, H.F. Student Handbook for the Study of the Future. Washington, D.C.: World Future Society, 1979.

Elgin, D. Voluntary Simplicity: Toward a Way of Life That is Outwardly Simple, Inwardly Rich. West Caldwell, NJ: Morrow, William Can Co., Inc. (6 Henderson Drive, 07706), 1981., $4.95.

McFarland, M & Ramstetter, V. Exploring Living Environment, Bloomington, IL: McKnight Publishing, 1977. 343 pp., $11.96, Grades 7-9.

Focuses on student decisions in the areas of home and community, understanding self and others, housing concepts, and planning for the future. Intent appears to be developing a range of skills for healthy living. Interwoven into several sections is information on understanding the influences of other people and the environment on individual roles. Half of the book's content is in the area of housing and housing skills. Helpful resources and information in teacher's manual.

Schumacher, E.F. Small is Beautiful: Economics as if People Mattered. New York: Harper & Row, 1973.

The Simple Living Collective, American Friends Service Committee. Taking Charge: Achieving Personal and Political Change Through Simple Living. New York: Bantam Books, Inc., 1977.

3) Magazines

National Geographic Society. A Special Report in the Public Interest: Energy, Facing Up to the Problem, Getting Down to Solutions. Washington, D.C. (Depart. 5000, 20036), February, 1981. 10 to 99 copies $1.15 each; 100 or more, $1 each.

4) Pamphlets

Channing L. Bette Co., Inc. What Everyone Should Know About the Quality of Drinking Water. Greenfield, Mass., 1977.

Energy Conservation Scoreboard. Tallahassee: Governor's Energy Office.

Florida Department of Environmental Regulation. Drinking Water. Twin Towers, 2600 Blair Stone Road, Tallahassee, Florida, 32301.

Florida Department of Environmental Regulation. Nonpoint Source Pollution. Twin Towers, 2600 Blair Stone Road, Tallahassee, Florida, 32301.

Florida Department of Environmental Regulation. Permitting. Twin Towers, 2600 Blair Stone Road, Tallahassee, Florida, 32301.

Florida Department of Environmental Regulation. Wetlands. Twin Towers, 2600 Blair Stone Road, Tallahassee, Florida, 32301.

Home Energy Checklist. Tallahassee: Governor's Energy Office.

How to Save Gasoline ... And Money. Tallahassee: Governor's Energy Office.

How to Understand Your Utility Bill. Washington, D.C.: U.S. Department of Energy, 1980.

Keep Your Cool. Tallahassee: Governor's Energy Office.

More Heat for Less Energy. Tallahassee: Governor's Energy Office.

National Water Well Association. Ground Water Pollution Control. 500 West Wilson Bridge Road, Suite 135, Worthington, Ohio, 43085.

Share a Ride: Enjoy Life in the HOV Lane. Tallahassee: Governor's Energy Office.

United States Environmental Protection Agency. Acid Rain. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (#055-000-00198-7).

United States Environmental Protection Agency, EPA Journal Reprint: State of the Environment. 6(1), Jan., 1980. Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

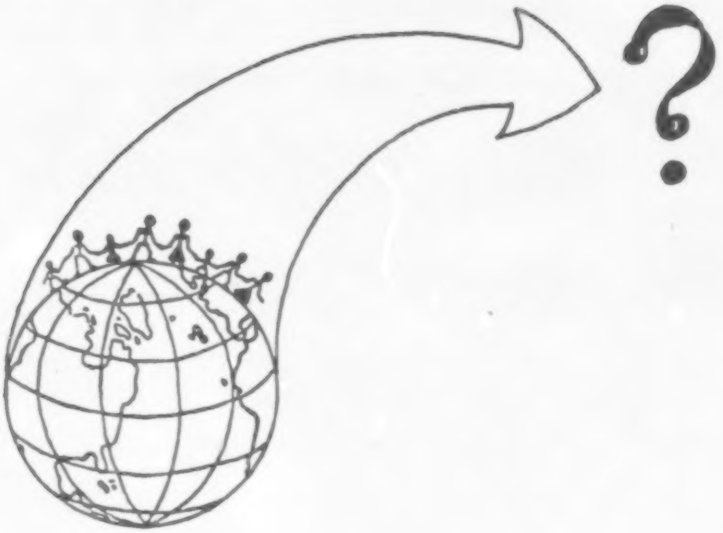
United States Environmental Protection Agency. *Is Your Drinking Water Safe?* Office of Public Affairs (A-107). Washington, D.C., 20460, March, 1977.

United States Environmental Protection Agency. *Water: A Resource You Can Help Restore*. National Recreation and Park Association, Arlington, Virginia and Design Communication Collaborative, Washington, D.C.

7) Other teaching materials

Selim, R., Snyder, D.P. & others. "Life-Styles," *The Futurist*, Febuary, 1979. (game)

Spitze, H.T. "Teaching resource conservation in home economics." *Illinois Teacher of Home Economics*, 21(3) 106-112.



INTEGRATING VOLUNTARY SIMPLICITY OF LIFESTYLE INTO FOODS AND NUTRITION

VOLUNTARY SIMPLICITY

IN

FOODS AND NUTRITION

Upon completion of this unit, participants will be able to:

OVERALL OBJECTIVES	ACTIVITY OBJECTIVES	ACTIVITY
1) Define the concept of Voluntary Simplicity		
	1a) List some lifestyle practices that are examples of Voluntary Simplicity	3
	1b) Define the terms associated with Voluntary Simplicity of Lifestyle.	4
2) Identify some future goals noting those which are compatible with Voluntary Simplicity and propose some ways of reaching these Voluntary Simplicity related goals.		
	2a) Use their imagination to think about their lives in the future.	10
3) Recognize the need to practice conservation attitudes about energy and resources as they affect each person's lifestyle.		
	3a) Identify some practices that help conserve water, electricity, and gas in the kitchen.	19, 20, 21, 22
	3b) List all of the steps of production of specified food items from begining to consumption	23
	3c) Become aware of how advertising influences food choices.	12, 13, 14, 15

OVERALL OBJECTIVES	ACTIVITY OBJECTIVES	ACTIVITY
4) Recognize the energy, resource, and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.		
	4a) Compare the cost (purchase and kilowatt), appearance and flavor, and preparation time of a convenience food product to the same product made from scratch	16, 17, 18
	4b) Compare the price of lunch purchased at a fast food establishment or restaurant to that of an equally nutritious "brown bag" lunch. The student will plan five nutritious, low cost brown bag lunches.	24
	4c) Plan 3 dinner meals using appropriate combinations of incomplete protein foods that serve as a complete protein source, when eaten together.	25, 26, 27, 28
5) Identify the personal reward and value in making the choice to seriously practice simplifying one's lifestyle.		
	5a) Discuss ways that the students can have an effect on these societal problems. Explain how these activities make the students feel about themselves.	11
	5b) Discuss the personal benefits of choosing food compatible with the Voluntary Simplicity Lifestyle	23

OVERALL OBJECTIVES	ACTIVITY OBJECTIVES	ACTIVITY
6) Identify and discuss creative solutions to lifestyle problems related to energy, resources, and economics.		
	6a) Become aware of alternative solutions to the challenges of both our physical and social environments.	1
	6b) Demonstrate that people often know more than they think they know about a given subject.	2
	6c) Prepare media appropriate for informing others about problems, involving energy, economics, and resources	11
	6d) Survey personal knowledge and attitudes toward world hunger	30
	6e) Explore the relationship between population growth, affluence, and Voluntary Simplicity in contributing to the food scarcity.	31

Integrating Voluntary Simplicity in Foods and Nutrition Into THE NEW CURRICULUM FRAMEWORK FOR HOME ECONOMICS IN FLORIDA

The topics on the left are mentioned in this Food and Nutrition unit on Voluntary Simplicity. Corresponding number and letter notations, on the right, suggest the most appropriate place the topic will fit into the outlined courses presented in The New Curriculum Framework For Home Economics In Florida.

Topic	Part	Page	Concept No.
Materials Resource Conservation	I	60	2C
Food Purchasing Guidelines	I	60	2F
	VII	20	7.0
	VIII	13	9G
Consumer in the Marketplace	II	60	9.0
Resource Management -- Energy	II	60	10C
Proteins	II	60	2A
Factors Affecting Food Choices	II	60	1.0
Convenience Foods	II	60	6F
	VIII	4	6E

GLOSSARY

To the teacher   The glossary is provided for two purposes. First, you can use it as a preliminary learning activity in itself, to familiarize yourself and your class with relevant terminology before starting the unit. Second, you can use it as a ready reference for vocabulary terms encountered in the unit background information and activities. In either case, copies can be xeroxed for student use.

Amps: abbreviation for amperes; a unit of electric current.

Complementary Protein: a concept based on the idea that when incomplete protein foods such as seeds, nuts, grains and dried peas and beans are eaten together they form a complete protein.

Conservation: the care or preservation of natural resources by wise use or management.

Convenience Foods: foods that can be eaten with little or no preparation.

Cooking Time: includes baking, boiling or broiling time and cooling, freezing or thawing time.

Developed Countries: countries characterized by low birth rates, low infant mortality, high income, literacy and much technological development.

Developing Countries: countries characterized by high birth rates, low incomes, limited education, low life expectancy, high infant mortality and limited use of technology.

Electrical Usage Peaks: periods of time during which the power company must increase its production of electricity to meet heavy demand from customers.

Energy: the capacity to do work; the power available to make something move.

Four Food Groups: method of grouping food based on similarities in nutrient composition; the four food groups are; dairy products, meat and meat substitutes, fruit and vegetables, and bread and cereals.

Kilowatt: 1,000 watts.

Kilowatt Hour: unit used to measure electrical usage in a period of time; one kilowatt hour means 1 kilowatt of electricity has been used in an hour.

Legumes: the biological definition of a legume is "a plant having pods that divide into halves, as peas and beans". Nutritionally, legumes are defined as dried peas and beans which have a high protein content and thus can be classified as a meat substitute. It should be noted that green beans are, according to the biological definition, a legume, but are not a legume using the nutrition definition. This is because green beans are not a good source of protein.

Lifestyle: a person's (or family's) preferred approach to living, including moral attitudes, preferred entertainment, living arrangements, style of dress and occupational choice.

Preparation Time: includes assembling equipment and supplies, mixing time and any time required to stir and beat as well as time needed to get food ready to serve.

Resource: a source or supply of something that is held in reserve; the estimated total quantity of something like minerals in the ground.

Traditional Lifestyle: one's preferred approach to living which is based on the way most people have chosen to live in the past.

Unit Pricing: a system that permits customers to compare the cost of products without having to do arithmetic. A product's unit price is the cost per unit or measure.

Voluntary Simplicity: a lifestyle in which individuals choose to live more simply, in consideration of the limited nature of the world's resources and with concern for the quality of life. This includes recycling, home production of foods, conservation of nature and energy, and an emphasis on sharing companionship and skills.

Volts: unit of electrical potential difference between two points in a conducting wire.

Watt: a unit of electrical activity or power.

ACTIVITY 12: Voluntary Simplicity in the Grocery Store

Overall Objective

Recognize the need to practice conservation attitudes about energy and resources as they affect each person's lifestyle.

Activity Objective

Become aware of how advertising influences food choices.

Teacher Background Information

Food prices in America have risen steadily in the past twenty years. Because the world's population is growing while the world's food supply is dwindling, food prices will continue to rise. Therefore, consumers shopping for food in the near future will require more skills and knowledge than most consumers have demonstrated in the past.

One aspect of practicing Voluntary Simplicity in food and nutrition, means that individuals need to acquire an awareness of how the media influences them to purchase items they neither need nor want. When individuals become aware of these advertising techniques, they are able to practice Voluntary Simplicity in menu planning and grocery shopping.

Unit Pricing: Unit pricing is a system that permits customers to compare the cost of products without having to do arithmetic. A product's unit price is the cost per unit or measure. For example, if five pounds of flour is $1.09, the unit price or price for one pound is $.218. Many grocery stores use unit pricing; but it is not mandatory. Unit pricing helps the consumer compare similar products quickly.

Directions:

Use information provided in the student handout and in the Teacher Background Information to discuss the effects of advertising and explain unit pricing.

Ask the following questions:

1. Have you ever bought something you didn't want, didn't need or didn't work?
2. Through how many different medias does advertising influence our lives? (T.V., radio, newspaper, magazines, in the mail, through in-store and window displays)
3. Can advertisements be misleading? How?

Distribute the shopping guide to the students. Go over the guide with the students. Ask the following questions:

1. How does Voluntary Simplicity and grocery shopping relate?
2. When grocery shopping, how many items do you or your family practice?

Voluntary Simplicity in the Grocery Store

-Don't Buy Something You Don't Need-
-Don't Buy Something You Don't Want-
-Don't Buy Something That Doesn't Work-

Sounds like sensible advice, yet how often have you been influenced by advertising techniques and bought something that you didn't need or want? Probably more often than you, or most people, would like to admit. But who, you might say, buys something that doesn't work? The teenager who buys potato chips and a soda for lunch is, essentially, buying a product that doesn't work. The grocery shopper who buys candy and cakes for snacks is buying a product that doesn't work. Foods that contain calories and little or no nutrients, or junk foods, are products that don't work because they do not contain the essential nutrients necessary for the body to function.

With the millions and millions of dollars spent on advertising each year, it's hard not to be persuaded to buy products that are not needed, wanted or don't work. Fortunately, there are skills you can learn that will make you less vulnerable to advertising techniques. By practicing some simple rules, you can make some changes in your lifestyle that result in more conservative shopping practices and take you one step closer to practicing Voluntary Simplicity in every area of your life.

Shopping Guide for Shoppers*

1. Prepare a shopping list based on menus for the upcoming week or two. Point of purchase advertising is directed at influencing impulse buying. Prepare a shopping list and purchase only items on the list.

2. Shop only when necessary and then buy enough groceries to stock up all storage space. This procedure will result in the conservation of time, energy and money.

3. Share a ride with a friend to the grocery, but once in the store, shop alone. Whenever possible, leave children at home.

4. Do not shop when hungry to avoid overbuying.

5. Comparison shop and use unit price information. Compare the costs of different brands of the same food product. Usually generic or store brands are cheaper. Compare the unit cost of packages that differ in size; compare the cost of fresh fruits and vegetables to frozen fruit and vegetables; compare non-standard cuts of meat to standard cuts, and so on.

6. Shop the day of the week that specials are advertised. Plan menus around the advertised specials.

7. Compare advertisements in the newspaper and then shop at more than one grocery store to take advantage of the better buys, but only if it is practical in terms of time and energy.

*Adapted from: Meal Management. Kinder, Faye and Nancy Green. Macmillan Publishing Company Inc., N.Y.

8. Take advantage of sales, specials and coupons, but only if the products are items regularly purchased. Coupons are a gimmick, used to advertise products. Contrary to a popular belief you really don't save any money by purchasing an item with a coupon if you never intended to purchase the item to begin with.

9. Buy food only at the grocery store. Don't shop in convenience or small stores. These stores are more expensive than larger grocery stores.

10. Lastly, don't buy junk foods, such as sodas, candy & other sweets that provide few nutrients relative to calories.

Supplementary Activities for Voluntary Simplicity in the Grocery Store

ACTIVITY 13 - Homework Assignment on Food Products

Background Information:

Six common advertising techniques*

1. Group identification gives the impression that you are part of a group deserving special concern.
   Example: a deodorant made for women.

2. Name association associates a group problem with a product.
   Example: a product associated with older people such as denture creams.

3. The Bandwagon Approach gives the impression that everybody is doing it or using it. If you don't join the group, then you are not part of the group.
   Example: drink a certain soft drink and you will be part of the now generation.

4. Transfer Effect uses a personality or object to promote a product. The idea is to get the consumer to believe if the person uses the product it must be good.
   Example: Cheryl Tieggs using a certain camera or Joe Namath using a certain after shave.

5. Card Stacking only emphasizes the key factors and the detrimental side is not mentioned.
   Example: promoting the use of a sleeping aid without diagnosing the real problem.

6. The Straw Man Effect gives the illusion that a problem is present.
   Example: use of a certain product will do away with wrinkles and make you look younger.

Directions:

Have students go through one or two magazines and cut out or make a record of ads that promote food products.** Since many students watch television they could alternatively keep a record of food advertisements on television. Regardless of the media the students are observing, the following information should be recorded:

1. Name of magazine or television show/s
2. Name of food item/s
3. Brief description of the ad or ads

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* Florida's Nutrition Education Currirulum, Grades 7-9, Language Arts
** Food Product: any item that one can eat or drink

The next day as each student reports on the advertisements they found, the teacher should ask the following questions after introducing the six common advertising techniques:

1. What audience (age group, male or female) was the advertisement geared to?
2. Which of the six advertising techniques, if any, were used in the ad? How does knowledge of these techniques affect your ability to practice Voluntary Simplicity of LIfestyle.
3. Is the advertised item a nutritious food or a "junk food"? Junk food is food that contains few nutrients relative to calorie content. Example: sodas, candy and other sweets, many desserts, alcoholic beverages, pretzels, potato chips and so on.

The teacher should make two columns on the board, nutritious foods and non-nutritious foods or junk foods. It should be interesting to note how many ads actually advertise nutritious foods, since advertisements generally promote products that people don't need or want.

The purpose of this lesson is to help students become aware how advertising influences their lives. The person who wants to practice voluntary simplicity needs to be aware of the various factors constantly at work that make life more complicated and extravagant and thus less simple and conservative.

ACTIVITY 14 - Voluntary Simplicity in a Week's Menu

Have students plan a weeks menu, breakfast, lunch, and dinner, for four using the grocery advertisements. Plan meals around specials and sales that week. Make a shopping list using the weeks menu, which would put Voluntary Simplicity principles into practice. Example: Recycling food

ACTIVITY 15 - Analysis of Expenditures in Terms of Need

Have students keep a record for 5-7 days of how they spend their own money. They should record:

1. Date
2. Item bought
3. Cost of item

At the end of the 5-7 days, students should report their findings to the class. How did they spend their money....On items they didn't need, didn't want or didn't work? The class should help each student decide whether items purchased were necessary or not. The teacher should make two columns on the board; necessary and not necessary. The items and their cost should be recorded in the appropriate column.

Activity 16 Convenience Foods

Overall Objective:

Recognize the energy, resource, and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.

Activity Objective:

Compare the cost (purchase and kilowatt), appearance and flavor, and preparation time of a convenience food product to the same product made from scratch.

Directions:

This is a laboratory activity that takes three days to complete. Students work in small groups preparing a food product by two different methods; they prepare the food item in its processed form and then prepare the same item from "scratch". The students compare the purchase cost, appearance and flavor, preparation time, and kilowatt hour cost of the two items. If your school does not have a food laboratory, a cost analysis can be done using labels, empty food containers and the weekly grocery advertising pages. The "cost of kilowatt hours used" activity can also be completed without a food laboratory if the students know the cooking times of the different food items. The number of food items evaluated will depend on the size of your class and the laboratory. The type of food items evaluated will depend on the length of your classroom period and available facilities. The following is a suggested list of items*:

Rice
instant
white
brown

Broccoli
frozen
fresh

Muffins
frozen
boxed
homemade

Macaroni & Cheese
frozen
boxed
homemade

Peas
frozen
fresh
canned

Pudding
instant
ready-to-eat

Biscuits
frozen
canned
homemade

Baked Potato
fresh
frozen

Waffles & Pancakes
homemade
frozen

Fruit Pie (two groups should work together to prepare this item)

1. canned fruit; fresh fruit
2. frozen pie crust; homemade pie crust

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* Consult cookbook for recipes

Suggested Procedure:

Day 1

1. Handout student worksheets stapled together.
2. Use the student worksheets as a guide to discuss convenience foods and introduce the activity.
3. Discuss the products to be studied and the forms for recording findings.
4. Determine serving sizes for each food.
5. Have each group make a work plan for the next day.
6. Have each group record on their forms all information that can be recorded today, (cost, ingredients, brand) so time in the laboratory will be spent cooking.

Day 2

1. Each group should prepare assigned food items today. Laboratory procedures are included in worksheets.

Day 3

1. Use the student handout from day 3 in the next activity to introduce kilowatt hours.
2. Have students complete the kilowatt hour form and answer the three questions on the last page of the student handout.
3. Students may want to prepare a poster to present their results to the class and then to the school. The cafeteria is an excellant place to display the posters.

CONVENIENCE FOODS

Overall Objective	Activity Objective
Recognize the energy, resource, and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.	Compare the cost (purchase and kilowatt), appearance and flavor, and preparation time of a convenience food product to the same product made from scratch.

Convenience foods are foods that can be eaten with little or no preparation. Convenience foods include a wide range of products from ready-to-eat chocolate pudding to skillet dinners. The popularity of convenience foods is generally attributed to the time an individual saves by using the commercially prepared product. For most convenience foods, time saved is paid for by the higher price of the convenience food. But the consumer should be aware that not all convenience foods are more expensive than their less processed or homemade counterpart; instant coffee is cheaper than home-brewed coffee, canned tomatoes are usually cheaper than fresh tomatoes, canned peas are cheaper than fresh peas and concentrated juice is cheaper than canned juice. In most instances, canned, frozen, and fresh fruit and vegetable prices are comparable and in many cases the canned and frozen fruits and vegetables are cheaper than the fresh produce because of the huge savings that can be made in mass production and avoidance of spoilage of processed fruits and vegetables.

This laboratory-activity takes three days to complete. On the first day you will divide into groups, decide on the serving size for your food item, make a work plan for your group, and partially complete data forms. On the second day you will compare the purchase cost, appearance and flavor, and preparation time of a convenience food product to the same, but less processed product. On the third day you will compare the kilowatt hour cost of preparing the same items.

Laboratory Procedure for Convenience Food Lab

1. Collect all ingredients to prepare the food item.

2. Be sure to time preparations and appliance use carefully. Record times on data sheet. Since time saving is usually one of the advantages of convenience foods and prepared foods, the true saving can be seen only when timing is accurate.

    a. Preparation time - includes assembling equipment and supplies, mixing time and any time required to stir and beat as well as that time needed to get the food ready to serve. Much of this time is eliminated in convenience foods. Also known as active time.

b. Cooking time - includes boiling, baking, or broiling time and cooling, freezing or thawing time. Much of this time requires little or no attention from the cook. Also known as inactive time.

3. Prepare the foods.

4. Calculate the number of servings of the selected size possible from each food prepared.

5. Calculate the cost of the food or dish prepared.

6. Figure the cost per serving. To show the true comparison cost, the size of the serving must be exactly the same for each form of food.

7. Arrange prepared foods on serving table. Record the appearance of the foods on the data sheet. Sample the foods: rate each as excellent, good, fair, or poor. Record on data sheet.

8. Clean up the laboratory.

9. If there is time each group should present a brief report to the class. Compare the foods as to time needed, amount of work involved, cost per serving, and your rating of the food. Have a class discussion of each food if there is time.

Calculating the Kilowatt Hours Cost of Kitchen Appliances

Day 3

The consumer who practices Voluntary Simplicity needs to consider all of the factors in deciding which is the most economical/ecological product to purchase. Voluntary Simplicity does not mean making everything from scratch, but instead learning and practicing methods that save energy; specifically in the food and nutrition area, learning to discriminate which methods of food production result in the most conservation of nature and energy. You as the Voluntary Simplicity Consumer must evaluate available evidence and make that decision.

Certainly the electrical cost of making a food product should be considered in evaluating the evidence. How many appliances do you use in making a food product? How long do you use the appliances? Does the electrical cost significantly raise the cost of the product? These are important questions to ask. So lets learn how to answer them.

The first things you should know are that electrical usage is measured in kilowatt hours (K.W.H.) and the electrical cost of using appliances can be determined by the number of kilowatt hours or fraction of kilowatt hours that appliance used. The following formula is used to determine the K.W.H. cost of using an electrical appliance.

Step 1: volts x amps = watts
Step 2: watts ÷ 1000 = kilowatts (K.W.)
Step 3: K.W. x number of hours or fraction of an hour you have used the appliance = Kilowatt Hours (K.W.H.)
Step 4: K.W.H. x cost of a K.W.H.* = cost of using appliance

*In Tallahassee, Oct. 1980, the cost of a K.W.H. was $.06. Call your local electric company to find out the cost of K.W.H. in your area.

On the face plate of an electrical appliance motor is the number of volts and amps, or volts and kilowatts, or volts and watts necessary to operate the appliance. If the appliance lists the watts or kilowatts on the motor plate it is not necessary to perform steps one or two. For most kitchen appliances you will be able to locate on the motor plate the watts or the volts and amps, and thus calculate watts. But there are several appliances that do not have a motor plate or do not have the motor plate located in an easily accesible place on the appliance. For these appliances please consult the table below to get the approximate wattage. If you cannot find the watts (or volt and amps) on the appliance or on the list below, please call a local appliance store. The salesman should be able to provide you with the information you need.

Appliance	Average Watts
Blender	386
Coffee Maker	1200
Dishwasher	1201
Hot Plate	1200
Mixer	127
Oven (microwave)	1450
Oven (bake)	4500
Oven (broil)	3000
Stove Top Large Burner	2200
Small Burner	1300

Example: The face plate on the electric skillet indicates it is 120 volts and 10 amps. How much does it cost to use the electric skillet for 2 hours? The cost of a kilowatt hour is $ .06.

Steps to Follow in Calculating Electrical Cost of Using any Appliance

Step 1: volts x amps = watts
Step 2: watts ÷ 1000 = kilowatts (K.W.)
Step 3: K.W. x hours = kilowatt hours (K.W.H.)
Step 4: K.W.H. x .06 = cost

Steps Applied to the Electric Skillet:

Step 1: 120 volts x 10 amps = 1200 watts
Step 2: 1200 watts ÷ 1000 = 1.2 kilowatts (K.W.)
Step 3: 1.2 K.W. x 2 hours = 2.4 Kilowatt hours (K.W.H.)
Step 4: 2.4 K.W.H. x $ .06 = $ .144

The cost of operating an electric skillet for 2 hours is 14¢.

Example: An electric blender pulls 385 watts for 15 minutes. The cost of a K.W.H. is $ .06. Find the cost of operating the blender.

Note: You can omit step 1 of the procedure because the number of watts the appliance pulls is listed on the appliance.

Step 2: 1000 watts ÷ 1000 watts = 1 Kilowatt (K.W.)
Step 3: 1 K.W. x .25 hours* = .25kilowatt hours (K.W.H.)
Step 4: .25 K.W.H. x $ .06 = $ .02

The cost of using a blender for 15 minutes is 2¢.

* 15 minutes x $\frac{\text{1 hour}}{\text{60 minutes}}$ = .25 hour

Without looking at the answer steps, work through examples one and two. Then fill out the Kilowatt hour cost form to calculate the total Kilowatt hour cost of the products you prepared.

Now that you have learned how to calculate the cost of using different appliances you should know that for appliances that have a heating unit the value obtained is an estimate of the true value. This is because the heating unit or element does not operate continuously. For example, in ovens the heating element operates continuously until the oven reaches a certain temperature, say 350 degrees. If you open the oven frequently during baking and let the hot air escape, then the heating element must work more often to keep the oven at 350 degrees.

Answer the following question on day three after completing all the activities:

1. Does a convenience food really save time? Compare preparation and cooking time for the two items.

2. Is there a difference in the total cost (purchase & kilowatt) of a serving of a convenience food and a recipe-made or homemade food? If so, which was the cheaper item to prepare? By how much?

3. Is the recipe-made or homemade product superior to the convenience food in appearance and flavor?

Food Item	Brand Name	Cost	Ingredients Added State Amounts	Cost of Added Ingredient	Total Cost	Size of Serving	# of Servings	Cost per Serving	Preparation Time	Cooking Time	Total Time	Appearance and Flavor
Example: Homemade Biscuits			2 C flour 1 C milk 4 T shortening 4 t baking powder 1 t salt	10.1¢ 15.4¢ 6 ¢ 0.2¢ 0.1¢ 31.7¢	32¢	2 in.	16	2¢/bis.	10 min.	12 min.	22 min.	golden brown, flaky, & tender

Food Item	Appliances Used	Time (min.)	Time (fraction of hour)	Volts	Amps	Watts (Volts x Amps)	Kilowatts (KW) $\frac{\text{watts}}{1000}$	Kilowatt Hours (KWH) (KW x time)	Average cost per KWH	Total cost/Appliance (kwh x average cost)
Example: Homemade Biscuits	Oven	20 min. (8,pre heat,+ 12,cook)	20 min x $\frac{1\ \text{hour}}{60\ \text{min}}$ = .33 hour			4500 watt	4.5 K.W	4.5 KW x .33 hrs. = 1.485 KWH	.06¢	.06¢ x 1.485 KWH = .0891¢, round off to .09¢ or 9 cents
	TOTAL KILOWATT HOUR (K.W.H.) COST TO PREPARE									
	TOTAL KILOWATT HOUR (K.W.H.) COST TO PREPARE									

Supplementary Activities for Convenience Foods

Activity 17 Comparison of Name and House Brands for Flavor

Have students prepare a food product that is a name brand and one that is either a house brand or an economy brand. Compare the price difference and flavor and appearance of the two products. Let the class sample the products without knowing which is which. See if they can tell a difference in flavor and appearance between the products. Example of products to compare: canned green beans, muffin mix, cornbread mix, frozen peas, soups.

Activity 18 Comparison of Name and House Brands for Economy

Have students plan a 2 day breakfast, lunch, and supper menu. Make a shopping list of items needed to prepare the meals for the 2 days. On the shopping list make two columns - one for name brand products and one for house brand or economy brand products. Go to a local grocery store or use newspaper advertisements and "shop" for the food items by writing down the prices on the shopping list. Compare the price difference between the two columns. Since this was a 2 day menu, multiply by 15 to estimate the money saved during one month by purchasing house-brand or economy brand products.

ACTIVITY 19 Conservation Checklist for the Kitchen

Overall Objective

Recognize the need to practice conservation attitudes about energy and resources as they affect each person's lifestyle.

Activity Objective

Identify some practices that help conserve water, electricity, and gas in the kitchen.

Directions:

The teacher should go over the conservation checklist with the students. Using the checklist, students can evaluate energy, water and gas usage in their homes. They should determine which conservation tips their family practices and which would be possible to practice in the future. The teacher should set aside time the following day for students to discuss what they discovered when they conducted an energy evaluation of their kitchen.

The following reference materials may be helpful in teaching this lesson: Home Energy Checklist (next three pages)
See reference list at end of unit for complete references.

Student Handout

Conservation Checklist for the Kitchen

This checklist is designed to help you identify ways to become a better energy manager. Decide which practices you currently do and which you plan on doing in the near future.

Have Done	Will Do	COOKING
		1. Never boil water in an open pan. Water will come to a boil faster and use less energy in a kettle or covered pan. Be sure to fill it up with only the water you need.
		2. Keep range-top burners and reflectors clean. They will reflect the heat better, and you will save evergy.
		3. Match the size of pan to the heating element. More heat will get to the pan; less will be lost to surrounding air.
		4. Watch the clock or use a timer; don't continually open the oven door to check food. Every time you open the door heat escapes and the oven temperature drops 25-30 degrees.
		5. Preheat oven only when necessary. Dishes requiring more than an hour's baking time may be placed in a cold oven. There is no need to preheat for broiling or roasting.
		6. Turn off the heat just before food is done. Retained heat will complete the cooking process for about five minutes at no extra cost.
		7. Use flat-bottom, clean utensils with straight sides and tight-fitting lids. Heat will be more evenly distributed and lose less energy.
		8. Bake several things at once. Plan oven meals; two or three dishes can be baked with little more energy than for one. If 3 dishes require 3 different temperatures (325-350-375 degrees), select the mean temperature (350 degrees) and bake all three, making a small adjustment in cooking time.

______ 9. Defrost all food before cooking. It takes more energy to cook frozen foods than completely thawed foods. This is true whether you're cooking in the oven, under the broiler, or on top of the range.

______ 10. Check the seal on the oven gaskets by trying to pull a piece of paper out of the door when it is closed. If the paper slides through, replace the gasket.

______ 11. Cook in the microwave or use a pressure cooker when possible. They can save energy by reducing cooking time.

______ 12. Use small amounts of water to cook vegetables. Start cooking on high, then reduce to simmer when liquid comes to a boil to complete the cooking.

______ 13. Use the self-cleaning feature on ovens right after cooking, when the oven is still hot. Use only when necessary.

______ 14. Self-Cleaning ovens use less energy for baking and roasting because they are better insulated than other ovens.

______ 15. When cooking on a gas stove, make sure the pilot light is burning efficiently - with a blue flame. A yellowish flame indicates an adjustment is needed.

______ 16. When purchasing a gas oven or range, look for one with an automatic (electronic) ignition system instead of pilot lights. Average gas use saved can be up to 47% - 41% in the oven and 53% on the top burners.

______ 17. Use moist heat to heat rolls, biscuits, and other items. The steam from uncovered pots and pans can be used to heat other items. Put a wire screen over the top of the pot and place rolls on the screen. They will be warm in 5-10 minutes. Double boilers can also be used to heat up 2 items at once.

______ 18. Use "high" only to bring food to steaming, then switch to lowest heat needed to complete cooking. The less heat used, the less energy required.

______ 19. Cook one-pot recipes. Many recipes are available for a complete "one-pot" meal that can be cooked on just one surface unit. This is economical because during most of the cooking time the unit is on "simmer".

Have Done	Will Do	Dishwashers
		1. Run the dishwasher only when full. This not only saves watts, water and money, but time and maintenance as well.
		2. Run the dishwasher only during the cooler part of the day, in the morning or after 9 p.m. This reduces the load on the air conditioner and avoids peak energy times. During peak energy periods (late afternoon and early evening), electric utilities often must use back-up generating equipment that is not energy efficient.
		3. Let dishes air dry. If the dishwasher doesn't have an automatic air-dry switch, turn off the control knob after the final rinse. Prop the door open and the dishes will dry faster.
		4. Don't use the "rinse-hold" on the dishwasher. It uses 3-7 gallons of hot water each time you use it.
		5. Scrape dishes before loading them into the dishwasher so you won't have to rinse them. If they need rinsing, use cold water.
		6. Use detergents and other cleaning agents specifically recommended by the manufacturer. Measure carefully. Too much or too litle can reduce operating efficiency.
		7. When buying a dishwasher, look for a model with air-power and/or overnight dry settings. These features automatically turn off the dishwasher after the rinse cycle. This can save you up to 10% of your total dishwashing energy costs.
		8. When buying a dishwasher, look for a model that has a water heating element as part of the dishwasher. The water heater in the house can then be kept at 105-120 degrees and the dishwasher will heat the water to 140 degrees (the temperature recommended for dishwashers).

Have Done	Will Do	Refrigerator/Freezer
		1. Open the refrigerator door only when necessary. Try to remove everything for a meal at the same time. It will reduce the running time of the compressor and save electricity.
		2. Replace faulty gaskets. Check gaskets by closing the door on a dollar bill - if you can pull it out freely, cold air is being lost and energy wasted.
		3. Avoid frost build-up. Manual-defrost freezers should be defrosted when the frost is ¼" thick. Ice build-up of more than ¼" reduces the cooling power of the coils which causes the compressor to work harder and therefore wastes electricity.
		4. Don't block air circulation. Don't store items against the air inlet and interfere with cold air circulation.
		5. Clean condenser coils twice a year with a soft brush or vacuum cleaner. The condenser coils (beneath or behind the unit) collect dirt which can significantly reduce efficiency.
		6. Place the refrigerator in the coolest part of the room away from the range or heater.
		7. Cover all liquids stored in the refrigerator because evaporation causes frost to build up.
		8. Don't keep your refrigerator or freezer too cold. For normal operation, a temperature of 35 to 40 degrees is recommended for the refrigerator section and a setting no lower than zero degrees is recommended for the freezer. Use a refrigerator thermometer or outdoor thermometer to check the temperature. Leave the thermometer in at least fifteen minutes before reading it.
		9. Keep the freezer as full as possible. It will use less energy and prevent heavy icing.
		10. Turn off, empty, clean and leave refrigerator door open when taking an extended vacation.

Have Done	Will Do	
		11. Consider buying refrigerators and freezers that have to be defrosted manually. Although they take more effort to defrost, these appliances use less energy than those that defrost automatically.
		12. Many refrigerators have heating elements in their walls to prevent condensation on the outside. Some newer models have switches to turn off these heaters, and they should be left off in air-conditioned homes where humidity is not a problem.
		Water
		1. Repair leaky faucets promptly. One drop a second can waste as much as 60 gallons of hot or cold water in a week.
		2. Use cold water rather than hot to operate the food disposal. This saves the energy needed to heat the water, is recommended for the appliance, and aids in getting rid of grease. Grease solidifies in cold water and can be ground up and washed away.
		3. Install an aerator in the kitchen sink faucet. By reducing the amount of water in the flow, less hot water is used and thus energy that would have been required to heat the water is saved. The lower flow pressure is hardly noticeable.
		4. Don't wash or rinse dishes in running water. A sinkful of wash water and one of rinse water will do the job just fine.
		5. Don't let the faucet run when scrubbing vegetables or preparing other foods. Use the sink or pot of water instead.

Supplementary Activities - Conservation Tips for the Kitchen

ACTIVITY 20 - Cafeteria Activity

The purpose of this activity is to help the entire school become aware of conservation tips for the kitchen. In this activity, students prepare a "conservation tips display" for the cafeteria. Four different displays should be prepared: Cooking Conservation Tips, Dishwasher Conservation Tips, Refrigerator Conservation Tips, and Water Conservation Tips. The displays can be prepared on poster board, newsprint or any other suitable material. Lettering should be large and easy to read. During the lunch hour-several students should "man" a table that is located below the displays. The student-teachers can answer questions and give out additional information i.e. the energy checklist (included in lesson) or energy reference materials that have been ordered from the reference list.

ACTIVITY 21 - Reading the Electric Meter

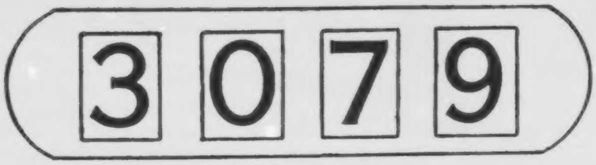
In this activity, students learn to read the electric meter. The electric meter tells you how many Kilowatt hours have been used. The difference in the reading from one month to the next is the Kilowatt hours used.

There are three different meters. The easiest of these to read is the cyclometer. You read it just like the mileage on your automobile (see figure No. 1).

The other types of meters are either four or five dial meters. (see figures No. 2 and No. 3). A four dial meter will read up to 10,000 kilowatt hours before it starts over again. A five dial meter will read up to 100,000 kilowatt hours before it starts over again.

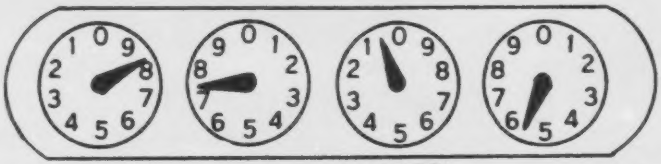
To read your meter, read each dial from left to right. To read each dial you use the number last passed by the dial hand. For example, if the dial hand has passed five and is not to six yet, you read that dial as five. The dial has passed the larger number if the dial on its right has just passed zero. Write down the figures from each dial in the same order you read them from left to right. Figures No 2 and No 3 with the actual reading under them may help you to understand better

FIG. NO. 1



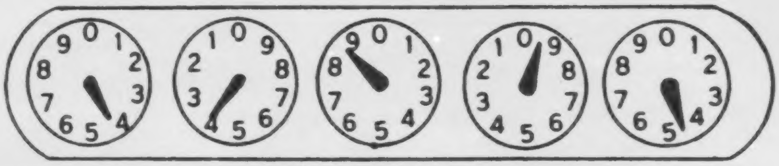
3079 KILOWATTS

FIG. NO. 2



8705 KILOWATTS

FIG. NO. 3



43894 KILOWATTS

By practicing Voluntary Simplicity of Lifestyle, you should be able to reduce the number of kilowatt hours used each month.

Activity adapted from North Florida Residential Energy Audit Workbook. See reference on page 231.

ACTIVITY 22 - Cost of Cooking

In this activity, students learn that what you cook, how much you cook, and how long you cook, determines what appliances to use. Using the attached handout, Cooking to Save Energy - It Doesn't Just Happen, have students decide:

1) Which cooking method uses the least Kilowatt hours? the most? (do this for each food item) example: for meat loaf, the pressure cooker uses the least amount of kilowatts.

2) Which cooking method is the cheapest? (do for each food item) example: for meat loaf, the method that uses the least number of kilowatt hours is the method that is also the cheapest. Therefore, the pressure cooker is also the cheapest method.

3) How much money is saved by cooking with the cheapest method compared to cooking with the most expensive method? example: for meat loaf, the cheapest method is the pressure cooker which uses 3.1¢, the most expensive method, the conventional oven uses 6.6¢. The difference between the two methods (6.6 - 3.1) is 3.5¢.

COOKING TO SAVE ENERGY - IT DOESN'T JUST HAPPEN

What you cook, how much and how long, determine what appliance to use. One study* made these comparisons:

Food	Cooked In	Electric Consumption	Approximate Cost @ 6¢/kwh
X-rib roast (3-3½ lbs)	Electric Skillet	0.7 kwh	4.2¢
	Pressure Cooker	0.7 kwh	4.2¢
	Microwave Oven	1.1 kwh	6.6¢
	Conventional Oven	1.3 kwh	7.8¢
	Slow Cooker	2.2 kwh	13.2¢
Meatloaf (2 Lbs. ground beef)	Pressure Cooker	0.52 kwh	3.1¢
	Microwave Oven	0.775 kwh	4.7¢
	Slow Cooker	0.85 kwh	5.1¢
	Conventional Oven	1.1 kwh	6.6¢
Glazed Pork Loin Roast (3½ lbs.)	Microwave Oven	0.56 kwh	3.4¢
	Pressure Cooker	0.8 kwh	4.8¢
	Conventional Oven	1.4 kwh	8.4¢
	Electric Skillet	1.42 kwh	8.5¢
	Slow Cooker	1.76 kwh	10.6¢
Roast Chicken (3-3½ lbs.)	Microwave Oven	0.5 kwh	3.0¢
	Pressure Cooker	0.53 kwh	3.2¢
	Slow Cooker	0.8 kwh	4.8¢
	Electric Skillet	1.05 kwh	6.3¢
	Conventional Oven	1.3 kwh	7.3¢
Fresh Green Beans (seasonings & ham)	Surface of Conventional Range	0.28 kwh	2.1¢
	Pressure Cooker	0.38 kwh	2.3¢
	Microwave Oven	0.46 kwh	2.8¢
Carrots (6-8 medium with sauce)	Surface of Conventional Range	0.2 kwh	1.2¢
	Pressure Cooker	0.25 kwh	1.5¢
	Microwave Oven	0.28 kwh	1.7¢
Baked Beans	Pressure Cooker	0.7 kwh	4.2¢
	Slow Cooker	1.2 kwh	7.2¢
	Microwave Oven	1.96 kwh	11.8¢
Fruit Crisp	Microwave Oven	0.25 kwh	1.5¢
	Electric Skillet	0.43 kwh	2.6¢
	Conventional Range	0.6 kwh	4.8¢
Cookies (3½ - 4 doz)	Microwave Oven	0.2 kwh	1.2¢
	Conventional Oven	0.67 kwh	4.0¢

* Calgary Power, Calgary Canada

Prepared by: Kathleen E. Wood
Assistant Professor
Extension Household
Equipment Specialist
bjd/April 1980

Florida Cooperative Extension Service
Institute of Food and Agricultural Sciences
University of Florida, Gainesville
John T. Wooste, Dean for Extension

Activity 23 Where Does Our Food Come From?

Overall Objective	Activity Objective
Recognize the need to practice conservation attitudes about energy and resources as they affect each person's lifestyle.	List all of the steps of production of specified food items from its beginning to consumption.
Identify the personal reward and value in making the choice to seriously practice simplifying one's lifestyle.	Discuss the personal benefits of choosing food compatible with the Voluntary Simplicity Lifestyle.

Directions

Divide the class into small groups. Assign each group a food item (breakfast cereal, beef steak, lettuce, canned peaches, chicken, tuna, bakery cake, apples, fresh shrimp, or jelly). Have each group list as many steps as they can think of which the food item would go through prior to consumption and the energy involved at each step. After compiling their lists have the students discuss which items reflect the values of a Voluntarily Simplistic Lifestyle. What kind of benefits would they personally receive by choosing foods more compatible with this lifestyle? A very good introductory film for this activity is "Toast". This film is available from the Governor's Energy Office. For more information on securing this film see Activity #5.

Example

Breakfast Cereal

Steps	Energy Used
Planting	Tractor gasoline
Fertilization	Tractor gasoline
Harvesting	Tracror gasoline
Processed into cereal	Factory energy
Packaged into box	Factory energy
Delivered to store	Transportation gasoline
In store	Electricity for store
Taken home	Car gasoline
Used with milk	Electricity for refrigeration

ACTIVITY 24: BROWN BAG LUNCHES

Overall Objective

Recognize the energy, resource and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle as opposed to traditional lifestyle practices.

Activity Objective

Compare the price of lunch purchased at a fast food establishment or restaurant to that of an equally nutritious "brown bag" lunch. The student will plan five nutritious, low cost brown bag lunches.

Teacher Background Information:

For this activity, students are asked to plan nutritious lunches. A nutritious lunch can be defined using the four food groups: Meat, Dairy, Bread & Cereal, and Fruit & Vegetable. Using the four food groups as a guide, a nutritious lunch for a teenager (ages 12-18) should contain:

Food Group	Amount
Meat and/or alternate-choose one of the following:	
meat, poultry, fish	3 oz.
cheese	3 0z.
egg*	1
cooked dry beans or peas	3/4 to 1¼ cups
peanut butter	4-5 tablespoons
Vegetable and/or Fruit (at least 2 different kinds)	1 to 1½ cups
Bread	1-3 slices
Dairy	1/2 pint of milk or equal amount of other dairy products.

Directions:

For this classroom activity the teacher should ask students to bring in menus from fast food restaurants and newspaper grocery advertisements. Students can work in small groups for this activity. Each group should plan 5 nutritious low-cost brown bag lunches and using the restaurant menus "order" 5 nutritious restaurant lunches. Then using the grocery advertisements and the price lists from the restaurants the students should determine:

1) the cost of the brown bag lunch for a week
2) the cost of the restaurant lunch for a week
3) the money saved by eating a "brown bag" lunch.

Each group whould report their findings to the class.

*when egg is used as the protein source, you need to supplement with 1/2 portion of meat or other meat alternative.

The teacher should ask the following questions:

1) Do you think there were fast food restaurants 20 or 30 years ago? (yes, Steak & Shake)

2) Do you think there were as many fast food restaurants 20 or 30 years ago.as there are today?

3) Why are fast food restaurants so popular today?

4) Do you think there will be more fast food restaurants in the future?

5) Is eating at a fast food restaurant everyday for lunch compatible with Voluntary Simplicity?

Activity 25 Complementary Proteins

Overall Objectives

Recognize the energy, resource and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.

Activity Objectives

Plan 3 dinner meals using appropriate combinations of incomplete protein foods that serve as a complete protein source, when eaten together.

Description

The teacher introduces the concept of complementary proteins using information provided in the student handout and teacher background information. Students plan 3 meatless meals using appropriate combinations of incomplete protein foods.

Teacher Background Information

It takes 8 pounds of grain (usually wheat) to produce 1 pound of beef. In a world where many people have nothing to eat, some people feel that this high conversion rate is an unjustifiable luxury. Yet, critics point out that not eating meat will not necessarily make more grain available to the world's hungry.

Regardless of this controversy, eating meat every night can be an expensive habit. High quality protein can be obtained by combining food products such as grain and legumes (peas and beans), or nuts and grains at a cost much below that of meat (protein). It is questionable whether eating meatless meals several times a week will help solve the world food problem, but it will help reduce the weekly grocery bill and be a statement on the part of the individuals who do so that they are concerned about the world food supply and are trying to do something to alleviate the situation.

COMPLEMENTARY PROTEINS

Overall Objective

Recognize the energy, resource and economic advantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.

Activity Objective

Plan 3 dinner meals using appropriate combinations of incomplete protein foods that serve as a complete protein source, when eaten together.

Everyone has heard of protein. You probably know that protein is found in meat, eggs, and milk and you may even know that protein builds muscles, repairs cuts and sores, and helps fight infections. But what is protein? Proteins are large molecules composed of smaller molecules called amino acids. There are 22 amino acids. The body can make all but 8 of the 22 amino acids. These 8 amino acids are called the essential amino acids (E.A.A.) and are: tryptophan, methionine, lysine, isoleucine, leucine, threonine, phenyalanine, and valine. The E.A.A. must be provided in correct proportions and at the same meal for the body to effectively use the amino acids to build body proteins.

Complete proteins, such as eggs, milk and meat, contain all 8 E.A.A. Incomplete proteins, such as legumes (peas and beans), seeds, nuts and grains, are partially deficient in one or two E.A.A. However, complete proteins are made by combining two different incomplete protein foods. For instance, legumes are a good source of the E.A.A. lysine and isoleucine, but are deficient in tryptophan and methionine. Grains are a good source of tryptophan and methionine but are deficient in lysine and isoleucine (see figure 1). By eating grains and legumes at the same meal, the two incomplete proteins serve as a complete protein source or complement each other. An incomplete plant protein can also be completed or made complete by the addition of a complete protein such as eggs or milk or meat. By taking advantage of this complementary effect, dishes and meals can be planned so that the amino acids in one food complement the amino acid deficiency in another food.

Complementary Proteins

Grains + Legumes
Seeds + Legumes
Nuts + Legumes
Dairy Products + Grains
Dairy Products + Seeds & Nuts
Dairy Procucts + Legumes

Figure 1

Food	Lacks Adequate Amounts of These E.A.A.	Contains Adequate Amounts of These E.A.A.
Most Legumes	tryptophan methionine	lysine, isoleucine* leucine, threonine, valine, phenyalanine
Most seeds, nuts, and grains	lysine isoleucine	tryptophan, leucine, methionine**, valine, Threonine, phenyalanine

* blackeye peas and mung beans are deficient in isoleucine

** peanuts are deficient in methionine and theonine

Assignment:

Plan three meatless meals. Several recipes from Frances Moore Lappe's book, Diet for a Small Planet, are included in this lesson. You can use the recipes in this lesson, or you can create your own recipes, or you can adapt a conventional meat recipe to a meatless one. Remember that combinations such as, legumes and grains, legumes and seeds, legumes and nuts, and dairy products plus nuts, grains or rice when eaten together serve as complete protein sources. The meals do not have to be fancy or exotic, the traditional southern meal of black beans (legumes) and cornbread (grain) is a perfect example of a complete protein meal made up of two incomplete proteins. So is peanut butter (legume) and jelly on bread (grain) with milk and fruit.

Ricotta Lasagne Swirls
(Wheat & Cheese Complement)

4 servings
Average serving = 14g usable protein. 32-39% daily protein allowance.

8 cooked lasagne noodles

Filling:
2 bunches spinach, finely chopped
2 tbsp. Parmesan cheese
1 cup ricotta cheese (1-1/2 lb.)
1/4 tsp. nutmeg
salt and pepper to taste

Sauce:
2 cups tomato sauce
2 cloves garlic, minced and sautéed
1/2 cup onions, chopped and sautéed
1/2 cup basil
salt and pepper to taste

Steam spinach until it is quite limp, but not mushy. You don't need any water to do this. Just put the washed spinach in a pan which has a tight-fitting lid and cook it over low heat about 7 minutes. Mix the spinach with the cheeses, nutmeg, salt and pepper. Coat each noodle with 2-3 tbsp. of the mixture along its entire length, roll up, turn on side so that you see the spiral, and place in a shallow baking pan. Mix all of the sauce ingredients together and pour over rolled-up noodles. Bake at 350 F for 20 minutes. (You can substitute your favorite tomato sauce recipe.) This is an especially attractive dish and much lighter than most Italian-style pasta dishes.

Sesame Eggplant Parmesan
(Grain and Sesame Seed Complement)

6 servings
Average serving = approx. 12g usable protein. 28-34% daily protein allowance.

1 large or 2 medium eggplants, sliced 1/2 inch thick
oil as needed
2 cups canned tomatoes (one 28 oz. can, mostly drained)
1/2 tsp salt
1 tbsp chopped parsley
1 bay leaf
1/4 tsp oregano
1/4 tsp thyme
1/4 tsp rosemary
2 cloves garlic, crushed
2 tbsp onion, grated
2 tbsp green pepper, grated
1 tbsp grated carrot
1/2 cup Parmesan cheese, grated
1 cup sesame meal, toasted
1/2 pound mozzarella cheese, sliced thinly
2 cups raw brown rice, cooked

Sauté the eggplant slices in oil over high heat until browned slightly, drain on paper towels, and set aside. Combine tomatoes, seasonings, and grated vegetables in a skillet, cover, and simmer 15 minutes. Remove bay leaf, add Parmesan cheese, sesame seed meal, and blend well. Place a layer of eggplant in an oiled, shallow 2-quart baking dish. Cover with half the tomato sauce, then half the mozzarella cheese. Repeat layers, and bake at 350 F about 30 minutes, until cheese is melted and begins to brown. Serve over the cooked rice.

Savory Stuffed Peppers
(Beans and Milk Complement)

6 servings
Average serving = approx. 7g usable protein. 16-20% daily protein allowance.

1 cup dry beans, cooked & mashed
oil as needed
1/2 onion, chopped
1/2 cup celery, chopped
2 cups tomatoes, canned, or 3 fresh tomatoes
1/2 tsp basil
1 tbsp parsley, chopped
salt to taste
liquid from canned tomatoes or water as needed
6 green peppers, seeds and membranes removed
2/3 cup cheese, grated, more as needed

Sauté the onion and celery in the oil until the onion is transparent. Stir in the tomatoes, mashed beans, and herbs, and add liquid if the mixture is very dry. Remove from heat and stir in the 2/3 cup grated cheese, and salt to taste. Fill the prepared peppers with the mixture and bake at 400 F in a pan with 1 inch of hot water in the bottom. Check to be sure the pan doesn't dry out during the 25-30 minutes of baking. During the last 10 minutes of baking, sprinkle more grated cheese on top of peppers.

Enchilada Bake
(Grain (cornmeal) and Bean Complement)

4 servings
Average serving = approx. 9g
usable protein. 21-25%
daily protein allowance.

1/2 cup dry beans, cooked	1 tsp cumin, ground
1 onion, chopped	salt to taste
1 clove garlic, minced	1/2 cup red wine
5-6 mushrooms, sliced	6-8 corn tortillas
1 green pepper, chopped	1/2 cup grated Monterey Jack cheese
1-1/2 cups stewed tomatoes	1/2 cup mixture of ricotta cheese and yogurt
1 tbsp chili powder	black olives

Saute onion, garlic, mushrooms, and pepper. Add the beans, tomatoes, spices, salt, and wine. Simmer gently for about 30 minutes. In an oiled casserole put a layer of tortillas, a layer of sauce, 3 tbsp grated cheese, 3 tbsp of the cheese-yogurt mixture. Repeat until all the ingredients are used, ending with a layer of sauce. Garnish the top with the cheese-yogurt and black olives. Bake at 350 F for 15 - 20 minutes.

Leafy Chinese Tofu (Soycurd)
(Grain (rice) and Legume (soy) Complement)

2 servings
Average serving = approx. 19g
usable protein. 44-53%
daily protein allowance.

1-1/4 cup tofu, cut into 1-inch cubes (1-1/2 lb.)	sesame salt, or toasted seed
spinach or any leafy green vegetable- torn into bite-size pieces	soy sauce
	1 cup raw brown rice, cooked
	oil as needed

Oil a large frying pan. Saute tofu cubes about 5 minutes. Push the cubes to the center of the pan and spread the torn spinach all around edge.

Sprinkle tofu with sesame salt and soy sauce. Cover the pan to steam the spinach until it is just wilted. Be careful not to overcook it. Remove from heat and drain excess liquid. Sprinkle soy sauce over the spinach, and serve with rice.

Variations: Spread a mixture of miso (soybean paste) and sesame butter, blended in equal proportions, on one side of sliced tofo and sprinkle with wheat germ. While you brown this side spread the miso-sesame mixture and sprinkle wheat germ on the second side. Turn once more to brown the second side.

Stuffed Cabbage Leaves

(Grain (rice) and Legume (soy) Complement)

4 servings
Average serving = approx. 9g usable protein. 21-25% daily protein allowance.

- 1-1/4 cup raw brown rice and 1/8 cup soygrits cooked together
- 1 onion, chopped, sauteed in oil as needed
- 1/2 cup pignolia nuts(or toasted sunflower nuts)
- 1 scant tbsp caraway seed
- 1/4 cup raisins
- 1/2 tsp salt
- 1 15-oz can tomato sauce (sweetened with 1 tbsp brown sugar, if desired)
- 12 whole cabbage leaves, steamed briefly
- 1 cup yogurt

Mix all, except last three ingredients. Add enough tomato sauce to moisten mixture. Place about 3 tbsp of this mixture on each cabbage leaf and roll it up. Secure with a toothpick, if necessary. Place the rolls in a covered skillet and pour the remaining tomato sauce over them. Cook about 15 minutes or until cabbage is tender. The contrast of the green cabbage and the red tomato sauce makes this dish quite beautiful. It is especially good topped with yogurt.

Variations:

1. Moisten mixture with 1 beaten egg instead of the tomato sauce.
2. Instead of removing leaves from the cabbage, cut out the center of the cabbage, boil 10 minutes and then fill with stuffing.

Middle Eastern Tacos

(Beans and Sesame Seeds Complement)

10 Tacos
2 Tacos = approx. 10g usable protein. 23-28% daily protein allowance.

- 1 cup dry garbanzo beans, cooked
- 1/2 cup (heaping) sesame seeds toasted
- 2 cloves garlic
- 2 tbsp lemon juice
- 3/4 tsp coriander, ground
- 1/2 tsp salt
- 1/2 tsp cumin, ground
- 1/4-1/2 tsp cayenne
- 10 pieces Middle Eastern flat bread or 10 wheat tortillas

Puree together all ingredients (increase spices to taste). Let stand at least 1/2 hour at room temperature. Cut pieces of Middle Eastern flat bread in half and fill "pockets" with bean mixture; or serve on wheat tortillas, fried until soft but not crisp. Add the following garnishes and allow everyone at the table to assemble their own "taco";

- shredded lettuce
- chopped tomatoes
- chopped cucumber
- chopped onion
- 1-1/2 cups yogurt or cheese

Wonderfully tasty and satisfying! Be sure to include yogurt or cheese on each protion to complete the protein complementarity.

Garbanzo Patties
(Bean and Sesame Seed Complement)

4 servings
Average serving = 7g.
usable protein. 16-20%
daily protein allowance.

- 1/3 cup dry garbanzo beans, cooked
- oil as needed
- 3/4 cup sesame meal
- 1/4 cup brewer's yeast
- 2 green peppers, finely chopped
- 2 onions chopped
- 1/4 lb. mushrooms, finely chopped
- juice of one lemon

Mash the cooked garbanzos and mix with lemon juice. Blend with remaining ingredients and shape into patties. Dip into raw wheat germ flakes and fry in hot oil quickly until just heated through. Do not overcook. (Hot or cold these patties make a good sandwich with lettuce, tomato, and your favorite dressing.)

Supplementary Activities for Complementary Protein

Activity 26 - Laboratory Activity on Meatless Dishes

Divide the class into small groups of 3 or 4. Have each group prepare a meatless dish. Use recipes included in this lesson or consult Lappe's book, Diet for a Small Planet or other vegetarian cookbooks. Evaluate the dishes for taste and appearance.

Activity 27 - Comparison of Cost of Meatless Versus Meat Dishes

Using newspaper ads, or visit the grocery stores, compare the cost of:

1. Ricotta Lasagne Swirls (included in this lesson) to a traditional lasagna recipe made with meat.
2. Stuffed Cabbage Leaves (recipe included) to a traditional stuffed cabbage recipe made with meat.
3. Savory Stuffed Peppers (recipe included) to the traditional stuffed peppers made with ground beef.
4. Nutty Bean Tacos (recipe included) to Tacos made with ground beef.

The teacher may want to divide the class into 4 groups and assign a meat recipe to each group. Each student in the group would be responsible for finding the price of a particular food item in the recipe. Students should determine the exact cost of the portion of the food item used in the recipe.
Example: If 4 oz. of cheddar cheese is used in the recipe and cheddar cheese costs $1.90 for 8 oz., the cost of 4 oz. cheese used in the recipe is $ .95.
The group should report their findings to the class.

The teacher should ask the following questions:

1. Why does meat cost more per pound than legumes, grains, and nuts? (Because it costs more to produce a pound of beef than to produce a pound of legumes).
2. Is eating meat every night compatible with Voluntary Simplicity? Why, why not?

Activity 28 - Finding Meatless Recipes

Have each student consult a cookbook and try and find two recipes that use wheat and legumes, legumes and seeds, or legumes and nuts. Students may have difficulty finding recipes that use protein complements so they may need to adapt a traditional recipe or create their own protein complementary recipe.

Activity 29: Film: Diet for a Small Planet

Show the film, Diet for a Small Planet. This film is based on the book of the same title by Frances Moore Lappe. It presents the unethical and uneconomical nature of a meat-based diet and shows how protein needs can be met without meat by combining vegetables and dairy source of amino acids in complementary portions. Types of foods that could be used to replace meat are illustrated and basic combinations which contain complementary proteins are given. Suggested dinner meals are also given.

Time: 28 minutes
Cost: rental-free
Order Number: 332-74
Contact: Food and Nutrition Information and Education Materials Center
National Agricultural Library
Room 304
Beltsville, Maryland 20705
(301) 344-3719

ACTIVITY 30: World Hunger Survey Questionnaire

Overall Objective	Activity Objective
Identify and discuss creative solutions to lifestyle problems related to energy, resources and economics.	Survey personal knowledge and attitudes toward world hunger.

Teacher Background Information:

Developing Countries - countries characterized by high birth rates, low incomes, limited education, low life expectancy, high infant mortality and limited use of technology.

Developed Countries - countries characterized by low birth rates low infant mortality, high income, literacy and much technological development.

Procedure:

1. Distribute questionnaire.
2. Explain to the students that the purpose of the exercise is to determine their understanding and feelings about world hunger and poverty. They are not expected to know the answers to every question.
3. After the students have completed the questionnaire, discuss the answers with the class. In Part 2, there are no right or wrong answers.

Answers to Part 1:

1. d
2. b
3. c
4. a, c, d
5. a
6. b
7. d
8. e
9. d
10. c
11. a, c, g
12. d, e, h
13. d

Adapted from: Food: Where Nutrition, Politics and Culture Meet by Katz, Goodwin & Gussow. Center for Science in the Public Interest. Washington D.C.

STUDENT HANDOUT

World Hunger Survey Questionnaire

Part I Factual Knowledge

1. The percent of the world's population which lives in developing countries is:
   a) less than 10% c) about 50% e) about 90%
   b) about 25% d) about 75%

2. The percent of the world's population which lives in the United States is:
   a) 3% c) 9% e) 15%
   b) 6% d) 12%

3. The United States has ____% of the world's resources.
   a) about 15% c) about 30% e) about 65%
   b) about 25% d) about 50%

4. Which three continents contain the majority of developing countries?
   a) Asia c) Africa e) Australia
   b) North America d) Latin America f) Europe

5. In 1958, a Central African earned enough money, from selling the United States 200 pounds of cotton, to buy four blankets. How many blankets could he buy today for the money earned from selling the same amount of cotton?
   a) 1 c) 8
   b) 4 d) 12

6. The average protein intake of each person in the U.S. is about 96 grams per day. In India it is:
   a) about the same c) 3/4 as much
   b) 1/2 as much d) 1/3 as much

7. The population of the world is approximately 4 billion(4,000 million). How many people suffer from insufficient protein/energy supply?
   a) 50 million c) 200 million e) 900 million
   b) 100 million d) 460 million

8. The world's largest importer of beef is:
   a) Taiwan c) U.S.S.R. e) U.S.A
   b) France d) Kenya

9. The average person in the U.S. or Canada consumes ____times as much grain as an Indian, Columbian or Nigerian.
   a) 1 c) 3 e) 10
   b) 2 d) 5

10. Approximately how many pounds of grain does a steer require to add on an additional pound of protein?
    a) 1 c) 8 e) 30
    b) 5 d) 25

11. Which three of these countries do you think have been designated most in need of food aid by the U.N. in 1974?
    a) Bangladesh
    b) Spain
    c) Honduras
    d) Cambodia
    e) Egypt
    f) Mexico
    g) Kenya
    h) Chile

12. Which three of these countries do you think were given the largest amount of U.S. food aid in 1975?
    a) Bangladesh
    b) Spain
    c) Honduras
    d) Cambodia
    e) Egypt
    f) Mexico
    g) Kenya
    h) Chile

13. The same amount of food eaten by 210 million Americans could adequately feed ______ Chinese on an average Chinese diet.
    a) 300 million
    b) 500 million
    c) 1 billion
    d) 1.5 billion
    e) 2 billion

Part II Attitudes

1. The food I eat is not really related to hunger in the developing countries of the world.

2. People are hungry because there just isn't enough food to go around.

3. Most Americans have an accurate idea of how Africans live.

4. If Americans practiced Voluntary Simplicity, there would be enough food to go around.

The questionnaire is based on "Survey Questionnaire on Global Development", Jayne C. Miller, *Focusing on Global Poverty and Development*. (Washington, D.C. Overseas Development Council, 1974), pp. 219-223.

ACTIVITY 31: Population and Affluence

Overall Objective

Identify and discuss creative solutions to lifestyle problems related to energy, resources and economics.

Activity Objective

Explore the relationship between population growth, affluence, and Voluntary Simplicity in contributing to the food scarcity.

Directions:

1. Divide the class into groups of four or five. Read aloud the statements below concerning the relationship of population growth, affluence, and Voluntary Simplicity in contributing to food scarcity.
2. Have each group agree, disagree, or remain undecided on the statements.
3. Tally the decisions of all groups on the board and discuss.

Statements:

1. Future generations of Americans should not hope for or seek a higher standard of living. Instead we should be content to live a simple but comfortable lifestyle.

2. About 7-8 pounds of grain protein are necessary to produce one pound of beef protein with present methods of raising livestock. Americans should reduce consumption of grain-fed meat to free grain for direct human consumption and demand that grass-fed meat be sold in stores.

3. The U.S. has 6% of the world's population, but consumes about 30% of the world's resources. The wealthier nations of the world should share much of their wealth with developing nations.

4. The world's population growth in the last few years is straining food resources. Therefore, no couple should be allowed to have more than two children.

Adapted from: Food: Where Nutrition, Politics and Culture Meet. by Katz, Goodwin & Gussow. Center for Sciences in the Public Interest. Washington D.C.

Supplementary Activities for Foods and Nutrition

Activity 32 -- Sprouting Beans

Have the students grow their own bean sprouts. They could then bring salad ingredients from home and set up a salad bar or just do tasting with the bean sprouts.

Activity 33 -- Recycling Food

Have a leftover food recipe contest. Recipes can include salads, casseroles or whatever else the students desire to include. All of the recipes can be combined to make a recycling food cookbook. Some suggestions are:

- collect small portions of cooked vegetables in a container in the freezer. Use in soups.
- pour oil and vinegar dressing over cooked vegetables. Marinate in refrigerator, and eat as a salad.
- for a quick spicy soup, add tomato juice and chili powder to any leftover beans or lentils.
- mash left-over beans and add as a protein rich filler to meat loaf.
- dip stale bread in egg and milk and fry for french toast.
- freeze left-over main dishes in foil-sized servings for one or two and label them.
- save all bones and meat scraps for making soups. Freeze in one container, and keep adding to it until there's enough for a good stock.

Activity 34 -- Food Advertising

Instruct the students to design a food label for the product of their choice. Remember, not only should it be appealing to the eye, but it should also meet federal guidelines for food labels.

or

Allow the students to write and produce their own food commercial. This could be video-taped or audio-taped. Some students may even prefer to draw a food ad for a magazine or newspaper.

Activity 35 -- Solar Tea

Place tea bags and cold water in a covered glass container outside where the sun will shine on it. As the water heats, tea will be produced. Compare the final product to tea made in the standard way as to clarity, taste and cost.

RESOURCE LISTING

1) Audio-Visual Materials

Can the Earth Provide
Film Board of Canada 1961
Contemporary/McGraw-Hill Films/#633405 28 minutes/black and white
Discusses the earth's capacity to produce food and the role science plays in discovering new food sources.

Challenge to Mankind
Film Board of Canada
Contemporary/McGraw-Hill Films/#633406 28 minutes/black and white
Discusses overpopulation and possible solutions.

Diet for a Small Planet
Food and Nutrition Information and Education Materials Center
Beltsville, Maryland 28 minutes/free rent
Presents unethical and uneconomical nature of a meat-based diet and explains how protein substitutes can be used to meet protein needs.

Energy Conservation for the Home, or How to Lower Your Utility Bill
Genesys Systems 4-hour video tape
Palo Alto, CA Cost: $810.00
Short course in methods to save energy in the home.

Energy Impact on Values and Lifestyles
Current Affairs Filmstrip
Wilton, CT $24.00
The impact of expensive energy and energy shortages on life-styles societal patterns, and existing values is examined.

Food or Famine
Shell Film, Shell Film Library
Studies the problem of world population and inadequate food supplies.

Food for a Modern World
Perenial Education, Inc. 16mm/color film
Highland Park, Ill. $300.00/$30.00 rent
World food supply, fertilizers, pesticides, and water shortage are discussed.

Food: More for Your Money
Alfred Higgens Productions 14 min./color film
Los Angeles, CA $120.00
Shopping lists, unit pricing, and comparison shopping is discussed.

The Food Revolution
CBS News Film 26 min./color film
Contemporary/McGraw-Hill Films/#648003-8
New food sources are explored.

How to Save Electricity
Encore Visual Education
Burbank, CA $21.00
This filmstrip discusses ways to save money on electric bills, how electricity is measured, and what individuals can do to decrease overall power consumption.

Life in the Balance
Standard Oil
Modern Talking Pictures 30 min./color
Award winning film that discusses world hunger and famine.

Must the World Go Hungary
Current Affairs Films
Wilton Court, CT $24.00
Discusses food habits, food sources, technological advances, and fabricated food sources.

Population and the American Future
Population Education, Inc.
Modern Talking Pictures/#4963 52 min./color
Examines the causes and consequences of population growth and distribution in the U.S.

Population Explosion
National Film Board of Canada
Contemporary/McGraw-Hill Film/#696798 15 min./color
Explores the growing world shortage of food caused by the current population explosion.

Practical Guide to the Energy Crisis
Prentice Hall Media
Tarrytown, Ny $50.00
Two filmstrips that examine causes, effects and practical solutions to the energy crisis.

Saving Energy at Home
Ramsgate Films
Santa Monica, CA $180.00
This film discusses major sources of energy waste in the home and explores ways to reduce home energy consumption.

Tragedy or Triumph
U.N./Journal Films
University of Michigan Audio-Visual Center 28 minutes
Food, as a world resource, is discussed. Possible solutions to the problem are explored.

2) Books

Elgin, D. Voluntary Simplicity: Toward a Way of Life That is Outwardly Simple, Inwardly Rich. West Caldwell, NJ: Morrow, William and Co. Inc. (6 Henderson Drive, 97706), 1981, $4.95.

Katz, Deborah and Goodwin, Mary. Food: Where Nutrition, Politics, and Culture Meet. Washington, D.C.: Center for Science in the Public Interest. A collection of activities about: eating patterns, nutrition, the lifecycle, the consumer, the food supply and hunger, both in the U.S. and the world.

Kauffman, D. Teaching the Future. Palm Springs, CA: ETC Publications. Written for teachers of all levels, this book contains information and student exercises on ways of thinking about the future.

Kinder, F. and Green, N. Meal Management. MacMillan Publishing Co., Inc., 1973. A textbook that deals with many aspects of meal management. A good reference source.

Lappe, Frances Moore. Diet For a Small Planet. New York: Ballentine Books Inc., 1975. This book contains background information and recipes pertaining to complementary proteins.

Otero, George and Smith, Gary. Teaching About Food and Hunger: 33 Activities. Denver, Center for Teaching Internationsl Relations, 1977. This book emphasizes decision making, critical thinking, conflict and values in solving problems dealing with food supply, world hunger and food economics.

What's to Eat and Other Questions Kids Ask About Food. The United States Department of Agriculture, 1979. This colorful paperback deals with the history of food and eating, shopping, basic nutrition, farming and foods of the future.

3) Magazines

National Geographic Society. A special Report in the Public Interest: Energy, Facing Up to the Problem, Getting Down to Solutions. Washington, D.C. (Dept. 5000, 20036), February 1981. 10 to 99 copies $1.15 each; 100 or more, $1 each.

4) Pamphlets

Channing, L. Bete Co., Inc. What Everyone Should Know About the Quality of Drinking Water. Greenfield, Mass., 1977.

Energy Management Checklist for the Home. Gainesville: Institute of Food and Agriculture Sciences, University of Florida. A checklist to help evaluate energy usage in the home.

Florida Department of Environmental Regulation. Drinking Water. Twin Towers, 2600 Blair Stone Road, Tallahassee, Florida, 32301

Florida Department of Environmental Regulation. Nonpoint Source Pollution. Twin Towers, 2600 Blair Stone Road, Tallahassee, Florida, 32301

Florida Department of Environmental Regulation. Permitting
Twin Towers, 2600 Blair Stone Road, Tallahassee, Florida, 32301

Florida Department of Environmental Regulation. Wetlands.
Twin Towers, 2600 Blair Stone Road, Tallahassee, Florida, 32301

Home Energy Checklist. Tallahassee: Governor's Energy Office. Checklist of energy conservation tips for lighting, water heating, appliances, windows and space heating and cooling.

How to Save Electricity in Your Kitchen. Florida Power and Light Company. Energy saving tips for the refrigerator, freezer, range, oven, dishwasher, and small appliances.

How to Save Kilowatts in Your Kitchen. Jacksonville, FL: Jacksonville Electric Authority. Simple tips for conserving kilowatts in the kitchen. Included is a chart on how much electricity certain appliances use.

How to Save Money on Your Electric Bill. Florida Power and Light Company. Energy saving tips for the air conditioner, range, oven, dishwasher, refrigerator, washer-dryer, water heater and lights.

National Water Well Association. Ground Water Pollution Control.
500 West Wilson Bridge Road, Suite 135, Worthington, Ohio, 43085

North Florida Residential Energy Audit Workbook. Tallahassee: Governor's Energy Office.

Save Brown Bag Lunches. 555H., Pueblo, Col. Types of food best suited for packed lunches; precautions to assure wholesomeness.

Soybeans in Family Meals. 192H., Pueblo, Col. Tips for using soybean products in menus; includes recipes.

Tips for Energy Savers. Pueblo, Col. Energy conservation tips for all areas of the home.

United States Environmental Protection Agency. Acid Rain
Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (#055-000-00198-7).

United States Environmental Protection Agency, EPA Journal Reprint: State of the Environment. 6(1), Jan., 1980. Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

United States Environmental Protection Agency. Is your Drinking Water Safe? Office of Public Affairs (A-107), Washington, D.C., 20460, March, 1977.

United States Environmental Protection Agency. Water: A Resource You Can Help Restore. National Recreation and Park Association, Arlington, Virginia and Design Communication Collaborative, Washington, D.C.

Water Conservation at Home.....Why to - Where to - How to -. Denver: American Water Works Association. Tips for water conservation at home and how to read a water meter.

7) Other Teaching Materials

Can the World Feed Us?
Kansas Vocational Curriculum Dissemination Center
P.O. Box 60
Pittsburg, SD 66762

A curriculum guide that facilitates the study of the world food situation.

Concentrate on Protein
Illinois Teacher
351 Education Building
University of Illinois
Urbana, IL 61801

This card game, designed for group use or as solitaire emphasizes complementary protein sources.

Food for Your Brood
Project SCAT
P.O. Box 370
Kissimmee, FL 32741

Individualized instruction booklets that provide facts, activities, and tips aimed at informing consumers about food purchasing, pricing, labeling and storing food.

Food: The Challenge to Manage Project Ecology
P.O. Box 6610
Seattle, WA 98166

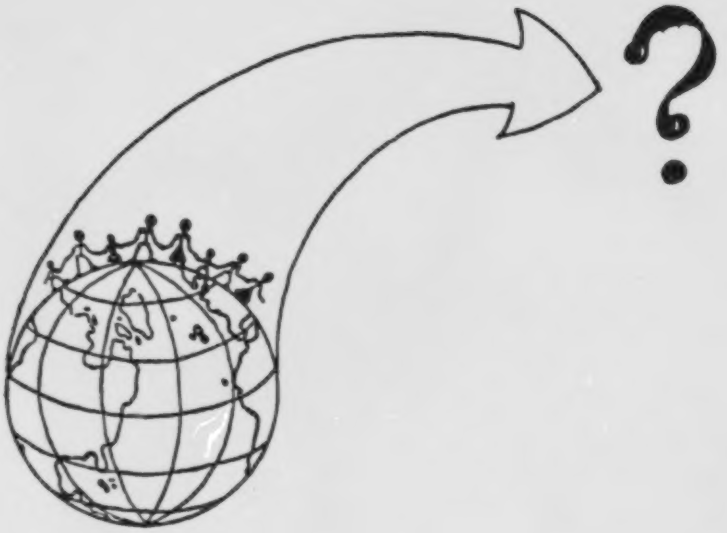
One of a series of units for environmental education for senior high students who have a basic knowledge of nutrition. Menu planning, food selection and nutrition are covered.

Household Energy Game
Sea Grant College Program
University of Wisconsin
Madison, WI 53706

This game is designed to help computation and reduction of energy usage. Consumption is compared to national and world averages.

Home Economics Curriculum Sampler. Selected by: David E. LaHart,
Florida Solar Energy Center, 300 State Road 401, Cape
Canaveral, Florida 32920

This publication contains selected curriculum units which include objectives and activities for specific topics.



INTEGRATING VOLUNTARY SIMPLICITY OF LIFESTYLE INTO CLOTHING AND TEXTILES

VOLUNTARY SIMPLICITY

IN

CLOTHING AND TEXTILES

Upon completion of this unit, participants will be able to:

OVERALL OBJECTIVES	ACTIVITY OBJECTIVES	ACTIVITY
1) Define the concept Voluntary Simplicity		
	1a) List some lifestyle practices that are examples of Voluntary Simplicity	3
	1b) Define the terms associated with the meaning of Voluntary Simplicity of Lifestyle.	4
2) Identify some of his/her future goals, noting those which are compatible with Voluntary Simplicity and propose some ways of reaching these Voluntary Simplicity related goals.		
	2a) Use their imagination to think about their live lives in the future.	10
3) Recognize the need to practice conservation attitudes about energy and resources as they affect each person's lifestyle.		
	3a) Name 5 ways we can save evergy when using the clothes washer. . .	12
	3b) Name 3 ways we can save energy when using the iron.	13
	3c) Locate and clean the filter of a clothes dryer.	14
	3d) List 10 ways we can save energy when we use the clothes dryer. . .	15
	3e) Locate information on water use and energy saving features for one washing machine.	16
	3f) List 5 new energy saving ideas found on list attached to the school's appliances	17

OVERALL OBJECTIVES	ACTIVITY OBJECTIVES	ACTIVITY
	3g) List 7 things we can do to save energy when using or choosing appliances	18
	3h) List 3 ways to improve energy use in the home through interior decoration involving textiles	25
	3i) List three ways textiles can be used in the home to decorate and improve energy conservation	26
	3j) Locate the direction each window faces in the student's home.	27
	3k) Using the Energy Efficiency Chart, evaluate the use of textiles in the home for the purpose of saving energy.	31
	3l) Send for 5 educational leaflets that give ideas on saving energy with clothing and textiles	32
	3m) List 3 things you want clothing to do for you. List 3 things you want to do for your clothing.	44
4) Recognize the energy, resource and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.		
	4a) Evaluate the cost of heating water for one year for a family of four	19
	4b) Identify the energy and economic advantages of reducing the amount of hot water used for washing clothes	20
	4c) Choose 3 appliances to give up for the purpose of saving money and energy.	21

OVERALL OBJECTIVES	ACTIVITY OBJECTIVES	ACTIVITY
	4d) Choose 3 appliances you could do without in order to save energy and resources.	22
	4e) Identify the economics and energy advantages of using the Energy Guides when purchasing an appliance	23
	4e) Evaluate appliances by cost and life expectancy.	24
	4g) Over a one month period collect 5 copies of articles that show examples of how energy, money and/or resources can be saved by using textiles for the home. . . .	28
	4h) Survey the Community stores and locate those that sell used clothing.	38
	4i) Write a paragraph summarizing the presentation on Second Hand Clothing by an invited speaker.	40
	4j) Repair one item of clothing to increase the garment's lifespan	45
5) Identify the personal reward and value in making the choice to seriously practice simplifying ones lifestyle.		
	5a) Plan and execute a class or school garage sale.	39
	5b) Renew one article of second hand clothing to give it a longer, useful life.	41
	5c) Swap an item of clothing you no longer want with a class mate. . .	42
	5d) List clothing items that belong to each student and assign an average value to each item to find out how much money has been invested in their wardrobes. . . .	46
	5e) Locate 2 or 3 stores in your area that carry the style of clothing best suited for your chosen career	47

OVERALL OBJECTIVES	ACTIVITY OBJECTIVES	ACTIVITY
	5f) Write a 2 page paper describing and justifying the wardrobe requirements for a selected career	53
	5g) Discuss ways that the students can have an effect on these problems. Explain how these activities make the students feel about themselves.	11
6) Identify and discuss creative solutions to lifestyle problems related to energy, resources and economics.		
	6a) Become aware of alternative solutions to the challenges of both our physical and social environments	1
	6b) Demonstrate that people often know more than they think they know about a given subject.	2
	6c) Name ten ways textiles can be used creatively in the home.	29
	6d) Turn fabric into a simple but creative Home Decorating accessory	30
	6e) Describe 3 ways we can dress to keep warm and 3 ways we can dress to keep cool.	33
	6f) Given 10 fabric samples and labels students will be able to identify which sample would be appropriate for cold weather and which would be best for warm weather with a 70% accuracy rate.	34
	6g) Evaluate the clothing habits of a family member for one week.	35
	6h) Examine and evaluate 5 pictures of people dressed to keep warm and 5 pictures of people dressed to keep cool.	36
	6i) Evaluate student demonstrations for keeping warm or keeping cool.	37
	6j) Redesign one article of clothing for the purpose of renewing its usefulness.	44

OVERALL OBJECTIVES	ACTIVITY OBJECTIVES	ACTIVITY
	6k) Evaluate the use of space in the clothes closet	48
	6l) List 5 ways to recognize quality in clothing.	49
	6m) Evaluate the garments in a fashion show for quality, fit, and career appropriateness.	50
	6n) List and price the clothing items needed for a professional career for one 5 day work week.	51

GLOSSARY

To the Teacher: The glossary is provided for two purposes. First, you can use it as a preliminary learning activity in itself, to familiarize yourself and your class with relevant terminology before starting the unit. Second, you can use it as a ready reference for vocabulary terms encountered in the unit background information and activities. In either case, copies can be xeroxed for student use.

1. Absorbancy: The ability of a substance to take up moisture.
2. Artgum Eraser: Soft pliable eraser that will not harm the surfaces while removing unwanted marks.
3. By-Products: Something produced in addition to the main product.
4. Career: A profession for which one trains.
5. Carpet: A heavy woven fabric used as a floor covering.
6. Consumer: One that uses economic goods to satisfy human wants.
7 Draperies: Hangings of heavy fabric for use as a curtain.
8. Energy Conservation: Planned preservation, protection and management of a natural resource (energy) to prevent waste, destruction, or neglect.
9. Environmental Conscience: An approach to life in which concern for the environment is an important part of all decisions.
10. Expenditure: An expense, something that requires financial outlay.
11. Exposure: A position with respect to the points on a compass or to climatic or weather influences.
12. Fabrics: Textiles, material, cloth.
13. Garments: Clothing, apparel.
14. Habits: A practiced way of acting, consciously or unconsciously.
15. Hard Water: Characterized by the presence of mineral salts that prevent lathering with soap.
16. Inheritance: A valuable possession or condition received from past generations.
17. Insulation: Material used to prevent the transfer or loss of heat.
18. Inventory: An itemized list of current goods (assets, apparel, etc.) on hand.
19. Kilowatt Hour: A unit of work or energy equal to that expended by 1000 watts in one hour.

GLOSSARY (cont'd)

20. Laundry: Clothes or linens set aside for the purpose of being washed or cleaned.

21. Manmade Fibers (Synthetic): Acrylic, Polyester, Acetate, Modacrylic, Nylon, Olefin and Aramid.

22. Nap: A fuzzy or downy surface on a woven or knit fabric.

23. Natural Fibers: Slender, elongated filaments of Cotton, Linen, Silk, and Wool capable of being spun into yarns.

24. Padding: A thin flat mat or cushion used for protection purposes.

25. Petroleum: Oil, a fossel fuel.

26. Pre treat: To treat beforehand.

27. Raw Material: Material whether in a natural state or processed that can be converted by manufacturer processing or combination into a new and useful product.

28. Redistribute: To spread to other areas.

29. Refurbish: To brighten or freshen up, renovate, restore to a better state by cleaning, repairing or rebuilding.

30. Research: Thorough, careful investigation.

31. Rugs: A piece of heavy thick fabric usually with nap or pile and used as a floor covering.

32. Solar Energy: That energy which directly results from the heat or light produced by the sun's rays.

33. Supporting Materials: Interfacing, underlining fabrics that give body or firmness to the garment.

34. Therm: Any of several units that measure the quantity of heat.

35. Traditional Lifestyle: One's preferred approach to living which is based on the way most people have chosen to live in the past.

36. Translucent: Permitting the passage of light.

37. Upholstered Furniture: Furniture made with materials (fabric, padding, and springs) used to make a soft covering.

38. Wardrobe: A collection of wearing apparel.

39. Water heater: A device that holds and increases the temperature of water.

Integrating Voluntary Simplicity in Clothing and Textiles Into THE NEW CURRICULUM FRAMEWORK FOR HOME ECONOMICS IN FLORIDA

The topics on the left are mentioned in the Clothing and Textiles unit on Voluntary Simplicity. Corresponding number and letter notations, on the right, suggest the most appropriate place the topic will fit into the outlined courses presented in The New Curriculum Framework For Home Economics In Florida.

Topic	Part	Page	Concept No.
Clothing Repairs	II	48	4C
	II	54	4.0
	II	81	4E
How and Why to Purchase Recycled Clothing	II	48	1.0
	IV	19	Intro.
	IV	36	3B
How to Recycle Your Wardrobe	II	48	4D
	IV	13	6.0
	IV	31	6C
Tips For Wise Shopping	II	48	1.0
Textile Fiber Properties And Textile Blends	V	4	6.0
	V	II	6B
Recycling Textiles For the Home	II	81	4E
	II	74	2E
Textiles for the Home	II	81	3.0
	II	81	4.0
Textile Maintenance	II	48	1.0
	II	54	6.0
	IV	4	6D
	IV	13	8.0
	V	4	6D
Textile Production	IV	25	5.0
	IV	36	3A
	V	4	6A

Unit Overview #1

Textile Production, Textile Maintenance, Appliances Used For Textiles and Energy

The following information is to help acquaint the teacher with this particular subject matter and to help in introductory classroom preparations. Four additional information sections will follow with activities related to the particular section.

The textile industry is comprised of establishments engaged in:

1. Production of fibers, yarns, threads, braids, twine and cords.
2. Manufacture of broad woven fabric, narrow woven fabric knit fabric, carpets, and rugs from yarn.
3. Dyeing textile products.
4. Coating, water proofing or otherwise finishing textile products.

The United States textile industry employs approximately one million persons and is dependent upon petroleum products and natural gas for energy. Petroleum and petroleum by-products are also the single most important raw material used in the manufacture of synthetic fabrics. The industry is ranked in the top ten in U.S. industrial energy use.

The textile industry uses about one percent of the nation's petroleum supply. The industry's total energy requirement is equivalent to 67 million barrels of oil per year. In 1974, this cost the industry 690 million dollars. It is estimated that the cost of natural gas has increased 150 percent and oil has increased 500 percent from 1970 to 1980. This has resulted in soaring prices especially for those fibers which have the shortest supply. For instance, there are not enough natural fibers produced to supply the world's demands. It is known that American cotton growers are attempting to increase the level of cotton production. This will help in the production of blends of natural and man-made fibers which have been used more widely as a result of the concern over the industry's energy use. It is a known fact that it takes more energy to produce a 100 percent polyester shirt than to make one of a cotton and polyester blend.

To prevent a reduction in textile production, increased costs, and resulting unemployment, the industry is using innovative methods to conserve energy and preserve the textile business. Manufacturers are doing everything from tightening bolts and pulleys, which improves machine efficiency, to using solar power for heating water. Energy conservation programs are being shared with other textile manufacturers. Between 1972 and 1976, these conservation programs resulted in an 11.2 percent energy efficiency improvement for the textile industry.

Students as consumers, must also think in terms of energy use for the care of textile products. Washing, drying, and ironing all require the energy which is becoming more scarce and more expensive. The selection of fabrics that require a shorter drying time or can be line-dried, along with fabrics that can be washed in cold water or need no ironing will result in costing the consumer less money and in conserving energy needed for the future. For example, a recent study indicated that in home laundering and drying, the combined energy demand for 100 percent cotton fabrics is several times higher than for 100 percent polyester or blends having high polyester content. It may cost more for the initial purchase of a polyester shirt because of the petroleum required to produce the synthetic, but a shirt with a 50/50 blend will require 30 percent less energy to maintain than a 100 percent cotton garment. Home laundering and drying, to maintain garment appearance, is a process that is repeated 20 to 50 times during the lifetime of a garment.

Home maintenance of our clothing requires energy for water heating, washing, drying and ironing. 85 percent of the energy used for washing clothes is for heating water. A 14 pound load can use as much as 26 gallons of water per complete wash and rinse cycle. We can reduce energy consumption about 50 percent by using warm water for washing and cold water for rinsing. For example, a hot wash and warm rinse combination requires 25 gallons of hot water. One load per day at this setting will easily cost $100.00 a year. Changing the rinse water to cold will save 8 gallons of hot water per day or $25.00 a year. By changing the wash setting from hot to warm, we can save another $25.00. We can increase savings in money and energy even further by using a cold water detergent, and washing in cold instead of warm water.

Use the following guidelines in selecting water temperatures for best laundry results.

1. Use Hot-130°F (54°C) or warmer for:

   -100% white and colorfast (non-fading) cottons
   -Heavy soil on white or light colored cottons
   -Grease & oil stains
   -Perspiration and deodorant stains
   -Diapers

2. Use Warm water-100°F-110°F (38-43°C) for:

   -Man-made fabrics, and permanent press or wash and wear clothing

3. Use cold-80°F (26°C) for:

   -All rinsing
   -Washable woolens
   -Bright colors, unless heavily soiled
   -Dark or bright colors that bleed out dye
   -Stains like milk, blood and fruit juice
   -Presoak or pretreated items with heavier soil

If using cold water makes soil removal more difficult, follow these washing tips:

1. Check water temperature to make sure it is not below 50°F (10°C).
2. Use a water softener if your water is hard to medium hard and use a non-phosphate detergent.
3. Pretreat spots, stains, and heavy or greasy soil with liquid detergent or a laundry pretreating aid.
4. Use more detergent. A general rule is use 1½ times the usual amount of detergent.
5. Dissolve powdered detergents in warm water before adding to the cold water even if the detergent is designed for cold water.
6. Fill the washer with cold water, add detergent in liquid form, agitate a few minutes and then add clothes.
7. For best soil removal, agitate the wash load for 12 to 14 minutes or presoak to give extra wash time.
8. Alternate the use of cold and warm water washings if garments become dingy.
9. Sort laundry according to color, amount of soil, fabric type, tendency to lint and water temperature requirement.
10. If using bleach to disinfect, remember you can use it for 75 percent of all colored garments. Also, liquid bleach is effective in cold water, where as an "all fabric" bleach diminishes in effectiveness from hot to warm to cold water.
11. Read detergent, bleach, pretreatment and presoak labels for best results.

Incorporating energy conservation into our laundry habits is important, however our conservation choices do not stop here. Many American households have dryers and even more homes have washing machines. Before we make the initial purchase of appliances such as these, we should consider energy efficiency and operating costs of the various models. We may find that an initially more expensive model may save more money in the long run when we calculate how much it will cost to run over time.

To help consumers with conservation, the Federal government is requiring an energy cost label be affixed to the following appliances: refrigerators, refrigerator-freezers, freezers, clothes washers, dishwashers, water heaters, room air conditioners, and furnaces.

This regulation has been required since May 19, 1980. The energy cost labels should show an estimated annual operating cost based on an estimated average use and a national average electric or gas rate.

For the clothes washer there will be two energy costs on the label: one for electric water heaters, the other for gas water heaters, plus the number of wash loads done per week. Energy figures are based on the current national average utility rates of:

4.97¢ per kilowatt hour for electricity
36.7¢ per therm for natural gas

Not all appliances, like the clothes dryer, are included in the labeling. This is because it was not technically feasible to calculate the energy costs.

When selecting appliances consider the following:

1. Cost
2. Options
3. Size required for family needs
4. Energy required
5. Cost of energy in your area

American households consume about one-third of the nation's energy requirements in the home and automobile. Any attempt to improve energy efficiency and conservation at the individual level could serve to save the nation millions of barrels of oil per year. This is energy we need to support life in the future. We need to think in terms of wise and efficient use of our resources so that we are able to leave a substantial energy inheritance to our future generations.

Activities will follow to help students develop a conservation conscienciousness when caring for and maintaining their clothing and textiles.

Activities Associated with this Overview: 12-24.

#2 TEXTILES FOR THE HOME

American homes use 12 percent of the nation's energy per year. Most of this energy for homes is needed for heating and air conditioning. Textiles can be used in the home to help conserve energy and improve personal comfort. To reduce energy consumption and costs, textiles in the following areas can help keep us more comfortable:

1. Carpeting, Padding, Rugs
2. Wall Coverings
3. Draperies
4. Upholstered Furniture
5. Bedding Material (Linens, Pads, Blankets)
6. Bath Linens
7. Insulation

Textiles can prevent heat loss in winter or heat gain in summer so less energy is required to heat and cool our homes. In addition, textiles help keep warmed or cooled air inside the home.

In a recent study it was found that by using the best carpet and padding, floor heat loss is reduced by as much as 54 percent if the floor is wood with a crawl space beneath it, and by as much as 72 percent if the floor is a concrete slab. This means that by using thick, dense carpet and high quality padding, from 7 to 15 percent per year of the energy for heating and cooling can be saved.

Textiles adapted for wall coverings aid the energy conservation effort. In early European history, large woven tapestries hung on castle walls for interior decoration and to prevent drafts and provide insulation. Today, textiles, some of which are incorporated into wall paper, provide some insulation and a visual sense of being warm. Even carpeting or artistic rugs are attached to walls today as well as tapestries.

Textiles help avoid the adverse affects that exposed window glass can have on room temperature. Determine the direction of the window's exposure to find out how much light and heat can enter the room. Use the following as a guide.

Exposure:
Southern & Western - admits most sunlight during the day.

Western - admits light from the setting sun.

Eastern - admits direct sunlight in the morning and indirect light the rest of the day.

Northern - admits only indirect light and is the coldest because it is in the direct path of heavy northern winds.

Draperies help reduce heat gain in summer and heat loss in winter. Heat loss through windows can cause up to 25-50% of heating costs. To be effective, draperies should:

1. Use closely woven, sturdy material for both the lining and the drapery.
2. hang to the floor
3. have a closed corner at the top
4. overlap at the center when closed
5. be secured to the wall at the sides
6. extend 10 cm (4") above, below, and beyond window sides if they cannot be sealed.

Light colored drapery lining will reflect hot summer sunlight back toward the window which keeps the inside cooler. Special insulated lining fabrics are available. Draperies provide a layer of insulation in winter which helps to keep cool air and drafts away from the home interior and also prevents an easy escape of warm air to the outside. More energy can be saved by closing draperies at sunny windows in the summer and opening them in the winter. In cold weather, keep shades and drapes closed at night, on cloudy days or over windows that are not reached by direct sunlight. Window shades can prevent 25-30% of window glass heat loss. The best shades are those that are quilted with fiberfill insulation, and fitted as closely as possible to the glass, window frame, and rests on the window sill. Window awnings (on northern exposures only) help block heavy winds and prevent heat loss. Experimentation is now taking place to test other window covering products to save energy. For example, a special window and door screen is reported to now filter out 75 percent of the sun's heat and conserve energy in the winter by reflecting indoor heat back toward the interior.

The need to conserve energy is so great that a wide variety of window coverings have been developed. Here are a few ideas of what you can make or purchase on the market.

1. A fiberfilled, quilted shade with a reflective metal surface that radiates warmth back into the room.
2. Folding shutters which have a center section of insulation faced with reflective foil, between wood panels.
3. Insulating drapery with a water repellent light-preventing lining and a layer of polyester fiberfill.
4. A shade of interlocking slats that roll up over the window for storage, or down side tracks right next to the window to close.
5. A translucent pop-in panel to cover skylights that admits 76 percent of outside light and helps insulate against the cold.

To permit air circulation for keeping cool in summer and avoiding drafts in winter, arrange furniture away from heat vents, radiators, and right next to windows. Wise choices in upholstery fabrics can help us keep comfortable all year long. When we need to keep cool, a smooth, tightly woven, absorbent fabric of cotton, olefin, or rayon is comfortable. Non-absorbent surfaces, like plastic or leather, which do not absorb perspiration, soon feels wet and sticky. In cold weather a soft, napped or pile fabric of acrylic, nylon, olefin and cotton helps keep us cozy. As the body comes in contact with the fabric, heat passes from the body to the fabric which warms up the surface. Napped or pile surfaces have many little spaces where trapped air can hold body heat making the fabric feel warm. Since it is impractical to have two sets of furniture to suit each year's temperature extremes, it may be wise to look for a fabric that would be compatible for both summer and winter such as cotton or olefin or invest in slip covers. Slip covers can be changed as the temperatures change to maximize personal comfort and protect furniture from soil and wear.

In order to rest properly, bedding materials need to help maintain body comfort, In warm weather a cotton bed pad and cotton muslin or percale sheets help absorb body moisture and feel the coolest. In the coldest weather cotton flannel sheets, a fiberfilled bed pad and light weight thermal blankets are recommended. If bedrooms are closed off from heat in winter, an electric blanket next to the flannel sheet, with a thermal blanket above it to hold in the warmth may be the answer. To prevent body heat loss, place a reflective surface either under the bed pad or between the mattress and box spring. If thermal blankets are not available, consider down and featherfilled comforters, fiberfilled comforters, or lightweight wool or acrylic blankets. Even an unzipped sleeping bag, handmade afghan or quilt can add warmth. If there are not enough blankets for the baby in the house, use a few large fluffy, terrycloth towels to keep warm. With the right bed materials, temperatures can be lowered without loss of comfort.

Textile choices for the bathroom can also affect our comfort. Cotton is the best fiber choice for towels because of its water absorption property. Looped terry towels absorb moisture faster than cut velvet towels. The faster and better moisture is absorbed away from the body the less chance there is of feeling chilly after bathing. If the floor is cold consider using a rug with an absorbent terry bath mat to catch water droplets. Consider the use of a two layered shower curtain with an inner plastic layer. This curtain will help hold in the heat from warm water during showers and baths. Pile covers for the toilet seat and tank, and wall to wall carpeting in the bathroom can add a cozy atmosphere. Towels and bed clothes warmed in the dryer or on a radiator can also add to personal comfort.

Finally, but perhaps most importantly, textiles, in the form of fiberglass batting, are used to insulate our homes for all kinds of weather. Thick layers, up to 12 inches or more, may be added to ground floors, outside walls and attics to prevent heat loss in winter and heat gain in summer. This maybe the most effective use of textiles for conserving energy in the American home. Wise use of textiles throughout the entire home can help maintain personal comfort and conserve our nations resources.

Activities Associated with this Overview: 25-31.

3 Keep Warm, Keep Cool, and Save Energy

Thermostat settings in our homes and offices affect our utility costs and energy use. To save energy, recommended temperature settings are kept at 65°F for winter and 78°F for summer. It has been estimated that compliance with the temperature guidelines year round can reduce the nation's oil use by 200,000 to 4000,000 barrels per day. Changing the way we dress can be the most economical and effective way of keeping comfortable. Clothing prices are rising more slowly than energy costs, so it makes sense to use our apparel in more effective ways so we stay warm in winter and cool in summer.

When the thermostat is regulated to conserve energy, correct clothing selection becomes necessary for maintaining body comfort. Here is an example of how some families changed their clothing and other habits in order to be more comfortable in cold weather. In an experiment where home temperatures were lowered an average of 6.6°F, families adapted their clothing habits by adding socks, sweaters, jackets, long sleeved shirts and blouses, thermal underwear, scarves, pantyhose, and layering garments. In addition, families adapted to the cooler temperatures by using heat from the fireplace, oven, and bath water; drinking hot beverages before bedtime; adding extra bedding; adjusting drapes; adding carpet; caulking windows; and using afghans or blankets when sitting still.

Our bodies lose heat when the surrounding temperature is less than the temperature of the body. The first symptoms of discomfort are cold fingers and toes. Hands and feet, at the end of the circulatory system, get less heat from other body parts. They lose more heat to the atmosphere due to the large surface area (skin) in relation to their mass (size). When the body is cold, the skin constricts making it a better insulator because the body surface area is reduced. The head, neck, and hands are most often exposed to the cold. Skin constriction to the fingers can reduce blood flow by over 90%. The body will shiver to exercise and make heat but when it cannot maintain the inside temperature of 98.6° we suffer from exposure.

Clothing prevents the loss of existing body heat by trapping the little air pockets found in crimped wool yarns, in a knit fabric, between fabric layers and between garments. For instance, it is known that several layers of light clothes produce lots of dead air space and air is a good insulator from the cold. Also, knit fabrics, which are constructed with loops, have many tiny air pockets which hold the air and act as insulation against the cold. It has been found that sweater knits and double knits have better insulating abilities than smooth woven fabrics because they have more little air pockets. Having insulative air in and around clothing is not the only important element for clothing to keep us warm. Certain factors affect the insulating value of clothing. These are:

1. Moving air takes heat more rapidly from the still air surrounding and insulating the body.

2. Moisture in garments fills up and drives out insulating still air. This accelerates heat loss when garments are wet.

3. Insulation is affected by a reduced air content as a result of pressing layers too close together.

When we choose fabrics to keep us warm consider the following.

Fiber Content : warmth depends on fiber properties and how the fiber is made.
Yarn Twist : natural or manmade crimp or curl which helps to trap air.
Fabric Construction: thick, loosely woven or knitted, pile, quilted, or bonded fabrics are best. For wind resistance, leather, vinyl, or nylon taffeta can help.

Do not use stiff or clinging fabrics or fabrics that do not spring back after being compressed.

Fabric Suggestions for Keeping Warm:

1. Wool - because of the insulating value of the fiber.
2. Pile and Brushed Fabrics - like corduroy, flannel, velvet, velveteen, velour, terrycloth, fur, and fake fur.
3. Quilted Fabrics - check type of filler and quality of sitiching which can make cold spots.
4. Goose Down - most warmth per unit of weight but expensive.

Here are some helpful hints for dressing to keep warm:

Choose the fit of a garment so that it allows an insulating layer of air between the body and the fabric.

Choose garments with neck and wrist closings to prevent the escape of warm air. A close fit at the waist and ankles will help.

Wear enough lightweight layers to trap air between the layers, but not compress the air space or prevent good circulation. Add or remove layers as temperatures or activities change. Wear the warmest layers next to the body.

Wear dark colors to absorb the sun's rays and warm hues (red, orange, and yellow) for a visual feeling of warmth.

Wear textured, long, thick socks and stockings. If these are layered, leave enough shoe room for foot circulation and insulating air.

Warm closed, shoes should have thicker soles, higher heels, warm linings (such as fleece) and be made of heavy, sturdy materials.

Wear thick mittens instead of gloves to trap more air around fingers and prevent heat loss from the added surface area in gloves.

Protect the head and neck from losing a major percentage of body heat by wearing a hood or hat and scarf. At 60°F, 33% of heat loss is through the head; at 5°F it is 75%.

Use scarves and belts to prevent heat loss.

Here is a list of some items that can be added to what we are already wearing that will help keep us warm.

- shawls
- afghans
- bonnets
- robes
- hats
- scarves
- long wool socks
- wigs
- long skirts
- night caps
- slacks
- lined garments
- jackets that cover the seat
- insultated pockets
- flaps to cover buttons and zippers in jackets
- cuffs inside sleeves
- drawstring hoods
- high necklines
- tucked pants in boots
- lined shoes in boots
- thermal underwear

Saving energy does not stop with changing clothing habits for cold weather alone. To keep comfortable during hot, sticky summers pay particular attention to the fibers, fabrics, and styles you choose to wear.

When choosing fabrics to keep cool consider the following:

Fiber Content : Choose absorbent fibers (like cotton, linen, silk, wool, and rayon) to allow body perspiration to evaporate.

Fabric Finishes : Note that stain and wrinkle resistant finishes may reduce the absorbancy while soil release finishes increase absorbancy regardless of fiber content.

Fabric Construction : Choose lightweight, open fabrics to allow for ventilation.

Fabric Drape : Avoid clinging fabrics that trap the air flow.

Here are some helpful hints for dressing to keep cool:

Choose loosefitting garments to allow for air circulation.

Choose garments with large openings so heat can escape.

Wear A-line garments instead of pants.

Wear short sleeved blouses and shirts.

Avoid lined garments and those with waistlines.

Wear a minimal number of layers.

Wear blends of natural and man-made fibers.

Wear light colors or white to reflect the sun's rays and reduce heat gain (up to 50%). Wear cool colors (greens and blues) for a visual feeling of being cool.

Wear lightweight short socks and open shoes or sandels. Avoid stockings.

Wear an open-weave, brimmed hat in the sun.

Choose water repellant, not waterproof, rainwear for better ventilation.

Avoid scarves, belts, and ties that trap body heat. This increases air flow by reducing the number of contact points between the garment and the body, like the neck, shoulder, waist, wrist and ankle. If used, make sure they are lightweight, absorbent and loosely worn.

To save even more energy in hot or cold weather, wear clothes that:

- can be washed in cold water
- can be line dried
- that don't need ironing

Changing your clothing habits can keep you more comfortable, reduce the nation's yearly oil use and save on your utility costs.

Activities associated with this overview: 32-37

#4 Redesigning, Recycling, and Refurbishing Clothing and Textiles

> To buy new clothes everytime fashions change requires a good deal of money --- and a tolerance for waste. However, with a certain amount of ingenuity you can keep in fashion by restyling your old clothes. Besides helping your budget, restyling can give you the fun of expressing your creative ideas inexpensively and the excitement of seeing something new emerge from a garment that you were ready to discard. Also, the finished look can reflect your individual taste, not something mass produced.[1]

How do we determine what clothes to recycle? First examine everything in your closet and dresser down to scarves and ties. Pull out things that you have not worn for a year or more. These items of clothing will be considered first. If you are sentimental about any item, put it aside until you are sure you want to cut into it. Expensive, yet little worn garments may come back in fashion, so these too you may want to reconsider altering (Crown, 1977).

Any fabric in reasonably good condition (or any part of a garment with some wear in it) can be used. Make sure that when different fabrics and trims are combined that all the parts are compatable in cleaning and sewing processes. Also, if different weight materials are joined, the strain should be on the heavier one. Clothing or textile items with cigarette burns or unremovable stains can be added to the recycling pile. If you find a moth eaten garment, cut around the numerous holes and use the material in small craft projects (unless there are only one or two holes that could be invisible stitched or covered) (Crown, 1977).

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[1] Fenya Crown, How to Recycle Old Clothes into New Fashions, Prentice Hall Inc., Englewood Cliffs, N.J., 1977, p.1.

Consider the fact that the material in men's clothing is often of superior quality when you decide to recycle it. Jackets, vests, pants, and coat, if the fabric is in good condition, can be transformed into suitable garments for anyone in the family. (Crown, 1977).

Look at all of your clothing and textile items as sources of fabric supply. Old hats can provide felt trim that won't ravel. Lace, ruffles and ribbons from linens and lingerie should be saved and recycled as they are needed (Crown, 1977).

Once you decide what clothing and/or textile to recycle, determine what each article will become. In practical terms, the logical choice would be a garment or other item that uses most of the fabric of the original item. If you are sewing for someone else, make sure you consult with that person before changes are made (Crown, 1977).

If in looking at your closet you decide you do not have a garment to recycle, consider the purchasing of used clothing or other textile products. There are quite a number of places where used clothing may be purchased. These include:

Thrift shops
Second Hand Stores
Flea Markets
Swap Meets
Goodwill
Salvation Army
The "Free Store" - where you can barter or trade for clothing items
Garage Sales

A surprising amount of clothing and textile items are purchased from these places. For instance, in research conducted at The University of California, Davis, on "Characterization of the Direct Market in Used Textile Products," the market for used clothing and textile products was studied for garage sales. Lynn O'Reilly and Margaret Rucker found that 26 percent of the garage sale shoppers purchased clothing and 23 percent bought other textile products. Sixty-five percent of the garage sale participants questioned, purchased one or more clothing items during the previous year. Seventy-six percent of the clothing purchasers, obtained items to be worn by them or a member of their family. Low prices and good condition were the reasons most important for buying clothing at garage sales.

If you decide to purchase used clothing or textile items, pay only 25% of the price of a comparable new item. Study the following elements before deciding to buy any clothing or textile item:

1. Cloth: check for quality, tightness of the weave, are the patterns woven in, will it be warm and/or cool?
2. Condition: look for worn out places, baggy knees, or any odors, and check seams and zippers to see if they work.
3. Style: look for items with a strong "folk" quality or those which you can create your own style as well as classic items that don't go out of style.
4. Size: buy only items that fit if you plan to wear them as is. If you can't try them on at least hold them against you to check for length and circumference.

Look for other clues to the quality of the item you are considering like:

1. Labels for the store name
2. Labels for the fiber content or care instructions
3. If the label says wool, recognize what the following categories mean:

   Virgin Wool- has not been used in any product

   Re-processed- has been used, but not in clothing

   Reused- has been taken from clothes
4. Lined garments usually provide a better fit and the lining protects the inside of the fabric from wear.

5. Look at the amount of fabric in the seam allowances and hems. The more fabric there is the better the quality of the garment.

Clothing and textiles can be redistributed without attention. Clothing can be swapped or traded for other clothing items from friends or family if you no longer want them. Clothing may also be recycled for smaller members of the family as they grow.

Clothing may be recycled for household needs as well, such as worn out items used for cleaning, dusting, or polishing clothes. Trims and lace from dresses may be recycled to decorate pillows or add a delicate touch around family pictures. Fancy handkerchiefs can easily be turned into beautiful little throw pillows to decorate a bed. Small scraps of fabric or trim can be turned into children's toys, Christmas ornaments, or used in quilts.

Household textiles provide materials for recycling. Pillow cases, sheets, towels, napkins, tablecloths, placemats and dresser scarves can all be converted into attractive garments. For instance, articles that no longer match your color schemes or are left over from sets that have worn out -- like a couple of napkins, a pillow case, or a childs blanket that is too small for a bigger bed -- can become useful again as clothes (Crown, 1977). Household textiles may be conserved for clothing or other household needs. For instance, an embroidered tablecloth or any unused household linen with scalloped edges or lace can make an apron or apron-pinafore. Sections from lacey dresser scarves or doilies can trim a collar, cuffs, or pocket, and make a fancy yoke for a top, dress or an apron bib. Floral sheets with pretty headings can be turned into sundresses, night gowns, or bathrobes with enough fabric left over for a matching drawstring purse or throw pillow.

Sometimes the only effort needed to extend the wear life of a garment involves a minor mending, patching or darning job. Too often garments or textiles are discarded for the slightest imperfections due to wear. With a little effort and few resources even favorite items can be given a new lease on life. Mending patching, and darning practices seem to have been forgotten but there are references available to help revitalize this fading art. A few mending, patching, and darning pointers are given below.

Mending Pointers

-For buttons that have pulled off and ripped the underlying material, sew a small patch on the inside of the garment to reinforce that area before sewing the button on.

-Zippers can be replaced securely and ripped stitches can be fixed by hand using a backstitch.

-If sock toes and heels are worn beyond the darning state, sew patches of a stretchable materials that breathes at these locations.

-If a favorite sweater or nylon shirt has a long run in it, consider hiding the run by embroidering over the area.

-Cigarette burns or holes sometimes can be covered with appliques.

-When pants or shorts are ripped at the seams so that no seam allowances are left, put in inserts of a different but compatible material.

Patching Pointers

-Patch faded garments with similarly faded material.

-If new fabric must be used to patch a washed and shrunken garment, also shrink the patch piece.

-On a ready-made garment, patch material can usually be taken from a facing, hem, pocket or sash.

-If the fabric has a design, slide patch material beneath the hole until the pattern matches. For material with and up-and-down pile, match the direction of the pile.

- Cut a patch with the grain of the material making sure the grain directions match those in the material being repaired.

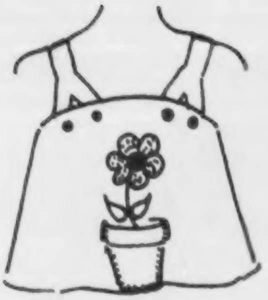
Darning Pointers

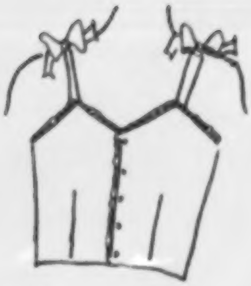
- Study the weave of the original fabric and reproduce it in the darn.
- Work under good lighting.
- Use a fine needle and short thread. A long thread pulled back and forth across a torn place, may pull the area out of shape.
- Darn on the right side of material and blend the darn into the fabric around the hole.
- Work for flatness. If yarns are pulled tight, the finished darn puckers. Loose stitching gives yarn a puffy look.
- Take small stitches. Do not draw the thread or yarn too tight when making a turn. Run the stitching unevenly into the cloth around the darn to prevent a heavy line around the darn.
- Pull the ends of darning yarn to the underside of work and cut off, but not too closely. Be sure all raw edges are on the underside.
- Steam press finished darn on the wrong side. If the material is wool or napped, brush the darned area to lift up nap.

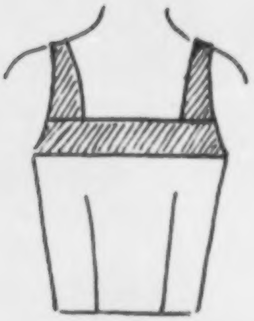
The following illustrations may be put up on a bulletin board to give students an idea of how to re-design clothing. (Page 47-57).

Activities Associated with this Overview: 38-44.

Camisoles







Camisoles can be made from tops of old dresses, ruffled or lace-edged pillowcases, or even ruffled slips (line very sheer material with an opaque fabric).

Enlarging Pants

Pants that have gotten too tight can be made larger by adding a decorative strip of fabric in the sideseams. See Fig. A.

Fig. A

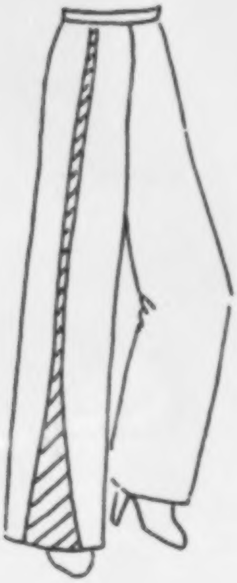
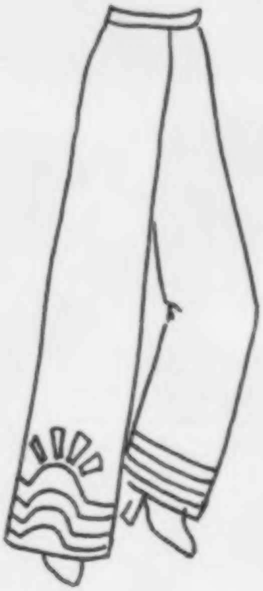


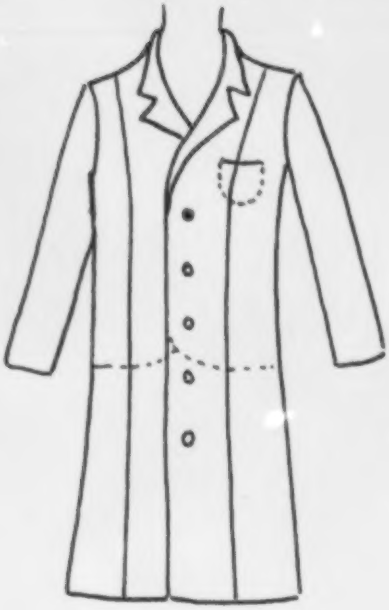
Fig. B.



Fancy Pants

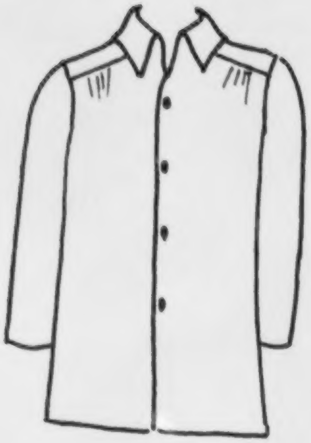
Pants can look dressy enough for special occasions by adding decorative fabric, beads, or embroidery to the pant's legs. See Fig. B.

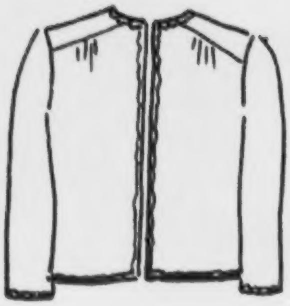
Updating A Coat



Sometimes old coats can be made more stylish simply by shortening them. Use the fabric that was cut off to make pockets or other features that help update the style.

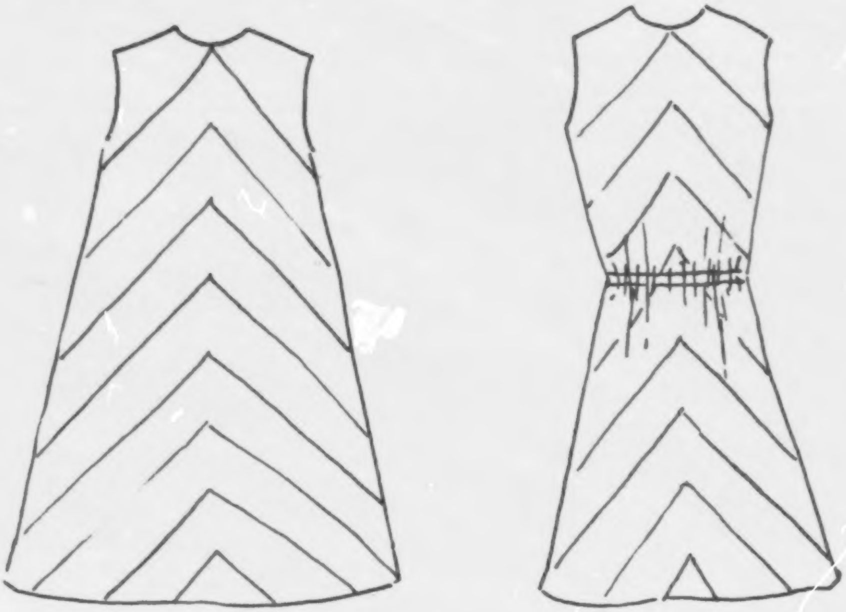
Recycling Jackets





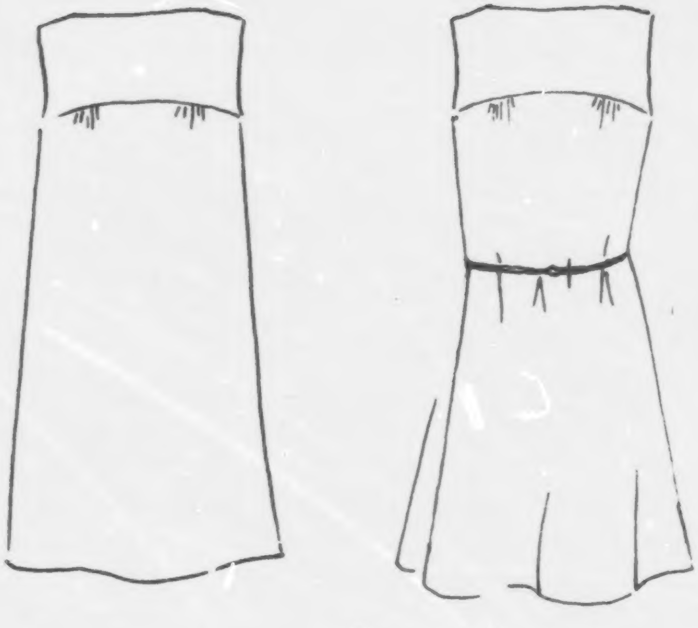
Shirt cut jackets can also be altered to make other forms of outer wear.

Restyling Dresses



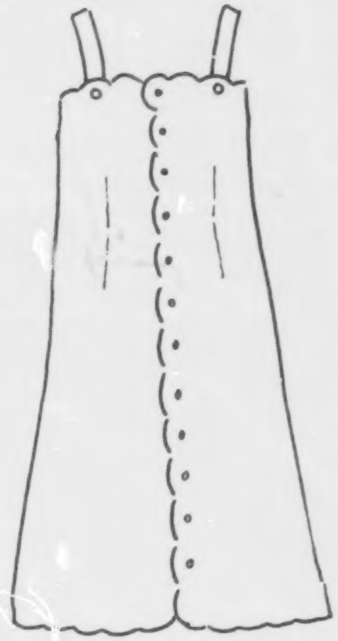
A bias-cut tent dress can be altered by adding elastic or a robe belt at the waist.

Restyling Dresses



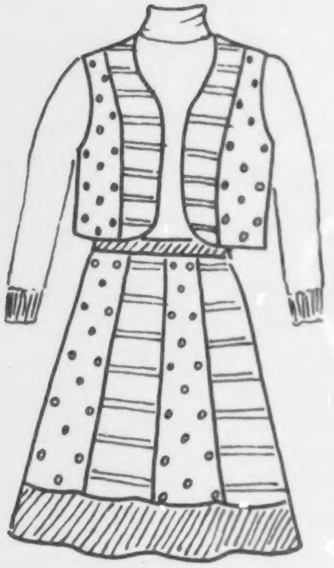
A smock-style dress can be restyled by simply adding a belt. No sewing is necessary.

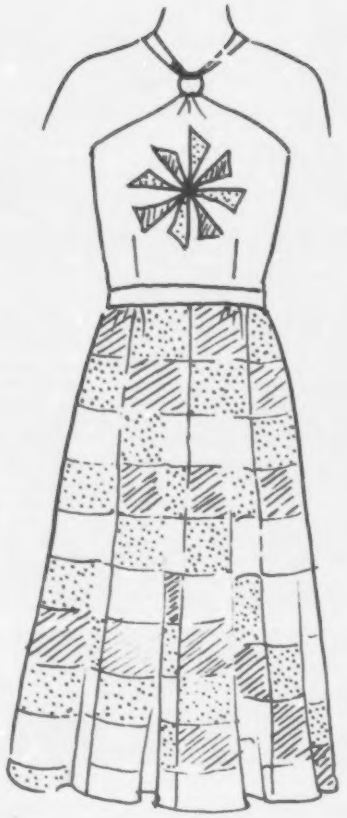
Reusing Fabric From The Home



An old tablecloth or similiar item with scalloped edges or lace can easily be made into a sun dress simply by adding buttons, darts, and shoulder straps.

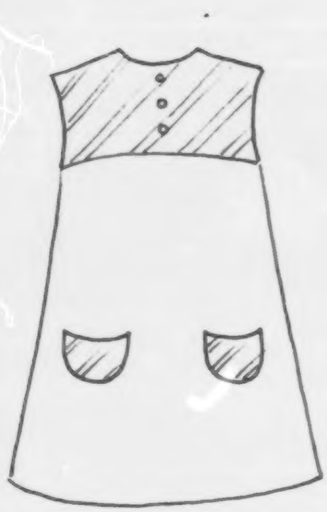
Patchwork

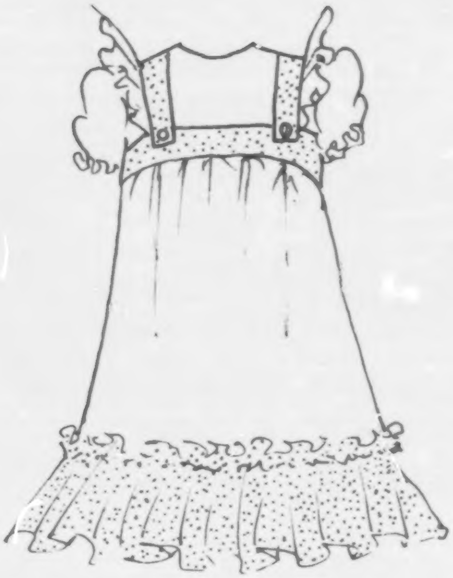




Many nice articles of clothing can be made with patchwork or remnants.

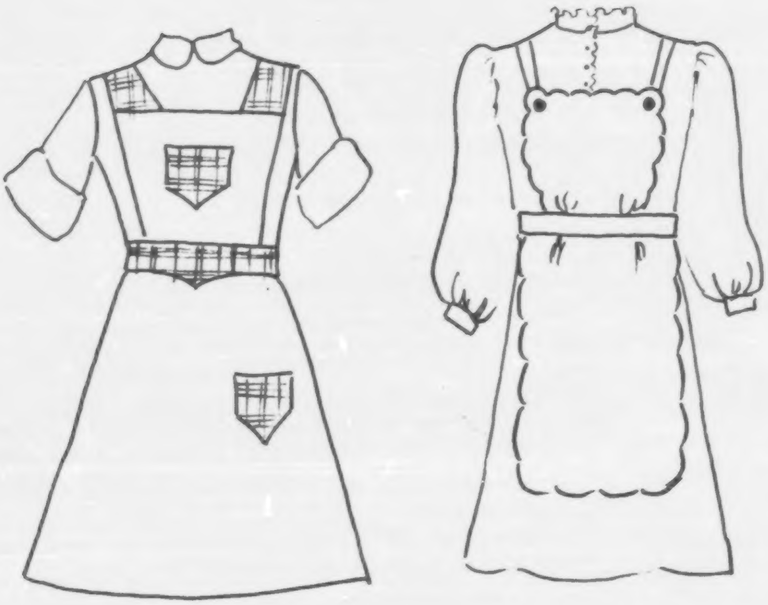
Children's Clothing





Loose fitting clothes for children, both as tops and dresses, are easy to make and comfortable to wear. The cloth for such clothes can come from left-over pieces of other projects, as well as from used adult garments.

Children's Clothing



Sometimes dresses and tops can be made into jumpers by enlarging the armhole so that there will be room for blouses under them.

#5 Wardrobe Considerations for School or Career

It is estimated that the average yearly amount spent on clothing is $200.00 per person. Clothing is a major expenditure so we need to take care of what we have and make wise selections when we shop. Before deciding what to buy, take stock in what you already have to get your wardrobe's worth. Take care of what you have, store and repair items promptly and properly, spot clean or care for garments at home, and update items for this year's fashions.

By using what we now have in our wardrobe we save a tremendous amount of energy. This is one way of practicing Voluntary Simplicity of Lifestyle. In this way energy is saved in transporting, processing, weaving, coloring, finishing, and merchandising new clothing.

Evaluate your present wardrobe by first taking an inventory. Discard (donate to charity, give to a friend, swap with a friend) or alter to fit any item not worn in the last two years. Check the discard pile to see if items can be paired with something else, or if they need a small change to be suitable. Consider these ideas for giving garments new life.

Reinforce knees
Turn a collar or cuffs
Slim pants or a skirt
Re-line a coat or jacket
Change the hem length
Add trim
Sew on a button

Straighten out storage areas and closets to preserve garment condition. Poorly hung or folded items wrinkle, and get pulls and snags. To clean up your closet start by getting things off the floor that tangle up robes, slacks or long dresses and coats. Put shoes on a narrow shelf, in a shoe box or on a shoe rack. In part of the closet install another pole below the original one to hold jackets, vests, blouses, skirts and pants on two levels. Add a layer of shelves above the pole for accessories or folded items. (Measure before installation to get correct widths and heights). Do not store leather items in plastic bags, because they need to breathe. Hang items up immediately using padded hangers for good clothes and rounded, plastic hangers for other items. Metal hangers may cause snags and hurt shoulder shapes.

To store items for a short time, plastic cleaner's bags are fine. For items worn only occassionally, use garment bags - plastic bags can build up mildew. Hang items that need cleaning or repair in a separate location. Hang nightclothes, robes or jeans on large ceramic or plastic hooks, or take a long nail with a wide head, slip it through a wooden spool and angle it up to hold items without snags, pulls or stress bumps. Smaller hooks in rows are fine for accessories' like ribbons, belts, or scarves. If repairs are needed do them immediately. Prompt repairs cut down on bigger repairs and costs, and stretch the useful life of a garment. There are gadgets and items that can make mending easier, like:

Knit-pik or knit fixers (pulls snagged threads to the inside)

Sweater Combs - that take off swearer pills

Knitted Collars, Cuffs and Waistbands

Replacement Pockets

Suede or Leather Elbow Patches

Iron-on Elbow, Knee and Sock patches

Iron-on Mending Tape or Fusible Webs to reinforce or fuse a hem in place

After evaluating your wardrobe ask yourself if you really need any particular item or items to make what you already have more successful. Make a list of what you need along with sizes and colors. The key to wise shopping is organization. To become an efficient shopper follow these suggestions.

1. Avoid last minute shopping. Poor decisions are often made under pressure. Also, do not shop when your ego is low.

2. Examine wardrobe needs. Do not base a purchase decision just on wants. Ask yourself "do I really need this?"

3. Keep a current inventory of your wardrobe. List garments by category in a handy pocket notebook. Add small samples of fabrics from wardrobe items you may want to match.

4. Comparison Shop. Check quality, costs, and fashion predictions to make sure they last a long time.

Shopping tips for Career Wear:

Buy quality garments that feel good, fit well and regain shape after cleaning for a number of years.

Build a wardrobe on strong, durable fabrics, that tend toward a classic look, and are appropriate for a number of seasons. Look for classic colors like camel, gray, navy and black.

Avoid extreme shapes in lapels, shoulders and pant leg width or skirt shapes in suits, which may go out of style.

Avoid unusual fabrics, colors, and patterns in suits, for the same reason.

Invest in garments of blended fabrics or a natural fiber like wool.

Insist on proper fit. For menswear this means:

Coat sleeves 1/2 to 3/4 inch above shirt cuff.

Slacks touch top of shoe and extend in back over the heel.

3/4 inch of shirt collar should show at the neck back.

Jacket collar should cling to the neck next to the shirt.

In general:

Fabric patterns should match at all seams from sleeve across the torso or or bodice, and from pocket to jacket.

Collar and lapel points should be even and well shaped.

Back jacket vents should be even on each side.

Check the number of stitches per inch in seams. The more stitches per inch, the stronger the seam.

All seams should be smooth and free of puckers and seam allowances at least 1/2 inch wide or more.

All facings should be flat.

Suit jackets should be fully lined to hang and fit well.

If alterations are needed as a result of body shape be sure the correction hides rather than accentuates the problem.

In mens shirts:

-Look for an extra row of stitching along shoulder and side seams added for strength and pucker prevention.

-Look for blends of cotton and polyester in a tightly woven fabric to make it reduce wrinkles, last longer and prevent pilling.

In mens ties:

-Check lining to make sure it does not show through or around the outer fabric.

-To loosen wrinkles store ties unknotted.

-Consider spray fabric protectors for all ties (except silk) to prevent soiling.

-Look for a dry cleaner who separates the lining from the outer fabric before cleaning. (This is the best way for ties to be cleaned and many cleaners do not take the time.)

In mens accessories:

-Use reversible belts with basic colors (brown and black) and moderately styled buckles.

-Do not overstuff your wallet. Look for a leather lining to strengthen and maintain leathers flexibility.

In shoes:

-The best quality leather is calfskin. Synthetics may crack and peel.

-To prevent stress, let leather shoes rest a day after each wearing. If possible, alternate shoes.

-To maintain shape and absorb moisture store shoes on unfinished wood shoe trees. (Use boot trees and put them in as soon as possible).

-To keep in good condition, polish shoes after every four wearings with a light paste wax.

-If shoes get soaked, stuff them with a towel to absorb moisture and then place on a tree. (Stuffed newspaper will do as well). Let them dry naturally then use a silicon spray, mink oil or a good polishing.

-If shoes get dirty, use a mild cleaner with lanolin to keep leather soft. Cleaners with alcohol or ammonia will damage leather. An Artgum eraser will remove some dirt from suede shoes. If nap becomes matted, gently brush back in shape. (An emory board can be used carefully).

-Use baking soda and water to neutralize and pull out salt stains.

-Use nylon taps on heels and toes to protect soles of new shoes.

-Have all shoes repaired promptly.

In General:

Zippers, buttons, or snaps should not be loose, or pull off. When closed, strain from pulling should not show and they should be easy to open and close.

Read the labels and care instructions and take them seriously.

Check for evidence of supporting materials and the closeness of the weave.

Look at construction details, like trim applications or top stitching, to give you clues on the quality of the workmanship in the garment.

Pick garments that are best suited to your needs and required care.

Always try the garment on to check for fit. The right fit avoids rips and tears and helps the garment last longer and look better.

Examine the garment inside and out to make sure it is appropriate for the material, style and use it will get. Always look for flaws.

If you are dissatisfied with any aspect of a purchase, return it to the retailer immediately or write the manufacturer.

Consider making your own clothing. You can build in the quality you want at the price you want to pay.

Clothing is an investment, so spend as much time organizing and planning your purchases as you do money. A successful wardrobe should be built from a strong foundation of quality garments in classic colors, styles and fabrics.

Scotchgard items like canvas bags or rain coats that stain or get dirty easily.

Save tags, extra button or yarn in case you need to mend or remove a stain.

Spot clean when possible to avoid over dry cleaning garments.

Attend to stains quickly, sponge any liquid spills, and do not iron over stains before taking garments to the cleaner.

Tailor your career wardrobe to suit your chosen field and the climate and area of the country where you will be working. Start out with some basic items in classic styles and colors and slowly build up a strong wardrobe foundation. Young executives who are trying to climb the ladder of success today are investing $1,000.00 a year in their clothing. Today's careers demand a professional well groomed look. If we make wise choices now in our clothing purchases, and take care of what we already have, that career wardrobe will not be hard to achieve and at much less of an expense.

ACTIVITY 12: THE CLOTHES WASHER (An Energy Check list)

Overall Objective:

Recognize the need to practice conserving energy and resources as they affect each person's lifestyle.

Activity Objective:

Name 5 ways we can save energy when using the clothes washer.

Directions:

Have students fill out the energy check list for the clothes washer. After students have completed the check list, take a class survey on who practices saving energy and who plans to practice saving energy. Discuss the importance of conserving the energy and resources related to washing clothes.

THE CLOTHES WASHER (An Energy Checklist)

Place an X in the appropriate space that best describes your energy habits.

HAVE DONE | WILL DO

___ ___ 1. The more closely you follow the manufacturer's operating instructions, the better your washer (or dryer) will work.

___ ___ 2. Use the automatic controls whenever possible. These control water levels and operating time and can help save on hot water usage.

___ ___ 3. Wash only full loads (unless they have small-load attachments or variable water levels) but do not overload your washer. The appliance will run less often and will need less maintenance over time.

___ ___ 4. Use the suds saver if you have one. It will allow you to use one tub full of hot water for several loads.

___ ___ 5. Don't use too much detergent. Follow the instructions on the box. Oversudsing makes your machine work harder and use more energy. Detergent residues make clothes look dirty, lint covered, and may be scratchy and uncomfortable.

___ ___ 6. Pre-soak, pre-treat or use a soak cycle for heavily stained items to avoid having to re-wash them.

___ ___ 7. Use water only as hot as necessary for adequate soil removal and sanitation.

___ ___ 8. Wash clothes in warm or cold water and rinse in cold. Use hot water only if absolutely necessary. Except in special cases- such as diapers that need hot water to kill germs - many clothes can be satisfactorily laundered in cold water (but not lower than 80°F/26°C). The cost of an average load with hot/warm water is about 28 cents. An average cold water load costs about 3 cents.

___ ___ 9. Reuse washwater if lightly soiled clothes were washed first. This can be done by removing the first load of clothes from the machine at the end of the wash cycle, leaving the water in the machine. Reload with a second load of clothes and reset the machine. When the second load is finished, the first can be put in for rinsing.

References

1. Center for Science in the Public Interest, 99 Ways To A Simple Lifestyle Garden City, N.Y., Anchor Books, 1977, p. 22.

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3. Governor's Energy Office, Home Energy Checklist. Tallahassee, Florida, Office of the Governor.

4. Tampa Electric Company, The Electric Washer and Dryer Explained, Tampa, Florida, Tampa Electric Company, 1979.

5. Tampa Electric Company, The Electric Water Heater Explained, Tampa, Florida, Tampa Electric Company, 1979.

6. U.S. Department of Energy, Low Cost - No Cost Energy Savers, Washington,D.C., Department of Energy. (CS-330)

7. U.S. Department of Energy, Tips For Energy Savers, Washington, D.C., U.S. Government Printing Office, 1978, pp. 13,16. (DOE/OPA 0037)

ACTIVITY 13 HOME ENERGY CHECKLIST: IRON

Overall Objective	Activity Objective
Recognize the need to practice conserving energy and resources as they affect each person's lifestyles	Name 3 ways we can save energy when using the iron.

Begin today to develop an energy management plan for your home. First, check to see how good an energy manager you are now. Second, if you are not doing so, keep a record of how much energy you use each month - cubic feet (cf) of gas, kilowatt-hours (Kwh) of electricity, or gallons of LP gas. Third, plan and list the energy saving practices you will use for the next year.

This checklist will help you to identify ways you can become a better energy manager.

Have Done	Will Do	
____	____	1. Eliminate ironing by cleaning and drying clothes properly.
____	____	2. Press clothes removed from the dryer while damp and warm as soon as possible to cut down on ironing time, energy and effort.
____	____	3. Save energy needed for ironing by hanging clothes in the bathroom while you're bathing or showering. The steam often removes the wrinkles for you.
____	____	4. If you have a steam iron, use distilled water to prevent mineral deposits on the heating coils, which reduces efficiency and wasted energy.
____	____	5. You can save ironing time and energy by "pressing" (hand smoothing) sheets and pillow cases on the warm top of your dryer. Fold clothes carefully, then smooth out on the flat surface.

ACTIVITY 14 CLOTHES DRYER

Overall Objective

Recognize the need to practice conserving energy and resources as they affect each person's lifestyle.

Activity Objective

Locate and clean the filter of a clothes dryer.

Background Information:

When buying a clothes dryer, look for an easy-to-clean filter. If the filter is easy to get to and clean, you are more likely to clean it after drying each load of clothes. The dryer operates more efficiently when the filter is clean and free of lint.

You can save energy when using a clothes dryer by not overloading the dryer. Another way to save energy when drying clothes is to match the dryer cycle and temperature to the type of fabric being dried. For example, polyester slacks require a shorter time and lower temperature setting than a cotton T-shirt. By being careful not to overdry fabrics, you can save energy. Overdrying causes your clothes to wear out faster, too. Some dryers have cool-down cycles. If the dryer does not have a cool-down cycle, you can save energy by drying several loads consecutively because the dryer does not have to heat up for each load.

Hanging your clothes outside to dry does save energy in the form of fuel while using your time and human energy. However, line dried clothes are often more wrinkled. Ironing these wrinkled clothes uses additional energy. Drying clothes on racks in the house in the winter adds much needed humidity (moisture) to the air you breathe. When drying clothes outside, the sunlight may cause some fire retardant finishes on clothes to lose their effectiveness.

Directions: Examine a clothes dryer at home or at school. Find and clean the filter.

From: Joyce N. Richardson, Energy Conservation In the Home -- You Can Make A Difference, Vocational Agriculture Service, University of Illinois, Urbana, Illinois.

ACTIVITY 15: HOME ENERGY CHECKLIST: CLOTHES DRYER

Overall Objective	Activity Objective
Recognize the need to practice conserving energy and resources as they affect each person's lifestyle.	List 10 ways we can save energy when we use the clothes dryer.

Begin today to develop an energy management plan for your home. First, check to see how good an energy manager you are now. Second, if you are not doing so, keep a record of how much energy you use each month - cubic feet (cf) of gas, kilowatt-hours (Kwh) of electricity or gallons of LP gas. Third, plan and list the energy saving practices you will use for the next year.

This checklist will help you to identify ways you can become a better energy manager.

Have Done	Will Do		
____	____	1.	Dry only full loads but do not over load. Overfilling your dryer is hard on the machine and clothes take longer to dry.
____	____	2.	Dry your clothes in consecutive loads. Stop-and-start drying uses more energy because a lot goes into warming the dryer up to the desired temperature each time you begin.
____	____	3.	Separate drying loads into heavy and light weight items. Since the lighter ones take less drying time, the dryer does not have to be on as long for these loads.
____	____	4.	If drying the family wash takes more than one load, leave small, light weight items until last. You may be able to dry them, at a reduced heat setting by using the heat retained by metal parts from earlier loads.
____	____	5.	Avoid over-drying, which wastes energy and can cause shrinking, a build-up of static electricity and wrinkling.
____	____	6.	If your dryer has an automatic dry cycle, use it. This will prevent over-drying.

Have Done	Will Do	
____	____	7. Remove clothes to be ironed while still damp and warm. Your job and the iron's will be faster and easier.
____	____	8. Except for 100% cotton, remove clothes when they still have a little moisture in them. This prevents clothes from wearing out as fast and some fabrics will be more comfortable with some moisture.
____	____	9. Clean the lint trap before drying each load. A clogged lint trap increases the dryer's operating cost by lowering its air flow and efficiency.
____	____	10. Remove items as soon as the dryer stops to avoid unnecessary wrinkling that will require pressing.
____	____	11. Be sure the dryer is vented to the outside of your home so moisture removed from the clothes won't be left inside.
____	____	12. Keep the outside exhaust of your clothes dryer clean. Check it regularly. A clogged exhaust lengthens the drying time and increases the amount of energy used.
____	____	13. Drip dry individual items and very small loads in your bathroom or on your porch, rather than running the dryer.
____	____	14. Let your dryer rest whenever possible by line drying your wash. (Remember the fresh, clean smell of a line-dried wash?) Use the dryer only in inclement weather. Careful hanging will help reduce wrinkling. (Free solar and wind power!) The heating element in the dryer uses most of your laundry energy budget - about $50.00 per year for one load per day.
____	____	15. Select the correct setting, according to the type of fabric and the directions in your dryer's instruction manual. This will protect your clothing and prevent energy waste.

ACTIVITY 16 CLOTHES WASHER

Overall Objective	Activity Objective
Recognize the need to practice conserving energy and resources as they affect each person's lifestyle.	Locate information on water use and energy saving features for one washing machine.

Background Information:

The amount of hot water used by a clothes washer varies. For example, the brand which uses the least amount of hot water uses about 15 gallons. Some brands use as much as 25 gallons of hot water. The machine which uses the largest amount of hot water uses more energy because energy is needed to heat the water. Another energy saving feature is a variable water level selector. This selector allows you to match the water level to the size of the clothes load. For example, if you are washing a small load of clothes, you could set the water level on low and save water. Or better yet, save clothes until you have a full load. Some washing machines have a small basket which uses even less water, detergent, and energy than the regular small load setting.

Directions: Find out how much hot water a clothes washer uses. Check a clothes washer. What special energy saving features can be found on it?

From: Joyce N. Richardson, Energy Conservation In the Home -- You Can Make A Difference, Vocational Agricultural Service, University of Illinois, Urbana, Illinois

ACTIVITY 17: Appliance Decals

Overall Objective:

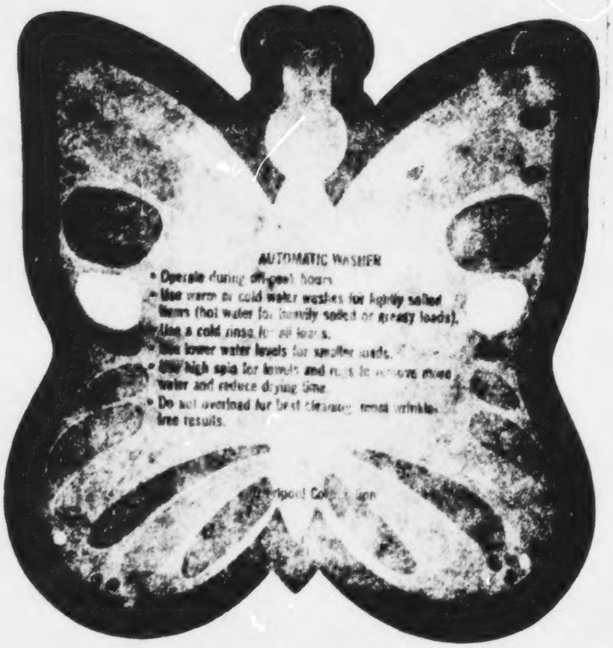
Recognize the need to practice conserving energy and resources as they affect each person's lifestyle.

Activity Objective:

List 5 new energy saving ideas found on the list attached to the school's appliance.

Directions:

Using the Whirlpool decal, which is zeroxed here as an example, construct a decal of your own and attach it to one of the school's appliances. Ask students to locate the decal and make a list of the energy saving ideas they do not practice, with appliances in their homes. Ask them to share these ideas with their parents, and increase the list with energy saving ideas contributed by all the family members. Bring this list back to school and share the ideas with the class. Collect the lists and make a composite list of energy saving ideas that can be shared with home members.



AUTOMATIC WASHER

- Operate during off-peak hours.
- Use warm or cold water washes for lightly soiled items (hot water for heavily soiled or greasy loads).
- Use a cold rinse for all loads.
- Use lower water levels for smaller loads.
- Use high spin for towels and rugs to remove more water and reduce drying time.
- Do not overload for best cleaning, most wrinkle-free results.

Whirlpool Corporation

ACTIVITY 18 HOME APPLIANCE ENERGY SAVERS

Overall Objective	Activity Objective
Recognize the need to practice conserving energy and resources as they affect each person's lifestyles.	List 7 things you can do to save energy at home when using or choosing appliances.

Fact: About 8 percent of all the energy used in the United States goes into running electrical home appliances, so appliance use and selection can make a considerable difference in home utility costs.

Do You:

Yes No

___ ___ 1. Do not leave your appliances running when they are not in use. It's a waste of energy. Remember to turn off your radio, T.V., or stereo before you leave.

___ ___ 2. Keep appliances in good working order so they will last longer, work more efficiently, and use less energy.

___ ___ 3. When buying appliances, comparison shop. Compare energy use information and operating costs of similar models by the same and different manufacturers.

___ ___ 4. Before buying new appliances with special features, find out how much energy they use compared with other perhaps less convenient models.

___ ___ 5. Use appliances wisely; use the one that takes the least amount of energy to achieve the same job.

___ ___ 6. Do not use energy-consuming special features on your appliances if you have an alternative.

___ ___ 7. Try to buy products (appliances) that will last. More durable products save the energy that would be required to make replacements more often.

___ ___ 8. Buy products(appliances) made of recycled materials or those that can be recycled like steel, aluminum, paper and glass.

___ ___ 9. Don't purchase motorized equipment or gadgets when hand-operated versions will do.

___ ___ 10. Don't buy a larger or more powerful appliance than you really need.

"Tips for Energy Savers" U.S. Government Printing Office

ACTIVITY 19: THE WATER HEATER

Overall Objective

Recognize the energy, resource and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.

Activity Objective

Evaluate the cost of heating water for one year for a family of four.

Background Information:

Comparative costs for water heating are shown on the chart below. These are based on average figures. Your water-heating costs may be higher or lower, based on the individual habits of your family.

The average person uses 15 gallons per day.

# people	#Gals/Day	#Gals/month	Average Consumption	$Cost*
1	15	450	117	$ 6.44
2	30	900	202	11.11
3	45	1,350	287	15.79
4	60	1,800	374	20.57
5	75	2,250	456	25.08
6	90	2,700	541	29.76

*based on approximately 5 1/2¢ per kilowatt-hour.

Directions: On the chart above, locate the number of persons you have in your family. Draw a line horizontally across the chart to find out the average number of gallons of hot water and the cost of the electricity per month. Figure out how much it would cost to heat water for a family of 4 for one year.

ACTIVITY 20: HOT WATER ENERGY COSTS

Overall Objective

Recognize the energy, resource and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.

Activity Objective

Identify the energy and economic advantages of reducing the amount of hot water used for washing clothes.

The following chart illustrates washer and dryer operating costs:

Washer (14 pound load)
Water: Hot - 140° Cold - 70° Warm - 99°

Setting	Gallons of Hot Water	KWH*	Cost
Hot/Warm	26.4 Gallons	4.55	28¢
Hot/Cold	17.8 Gallons	3.07	19½¢
Warm/Warm	17.0 Gallons	2.93	19¢
Warm/Cold	8.6 Gallons	1.48	11¢

Add approximately 2¢ a load for operation of machine.

Dryer (14 pound load)	KWH*	Cost
7 lb. load	2.69	15¢
14 lb. load	4.86	27¢

*Automatic setting. Manual setting slightly less.

Directions; From the chart above figure out how much it would cost to wash a 14 pound load on a Warm/Warm setting and to dry that same load. If a family washes and dries seven, 14 pound loads per week, how much does it cost to do a week's laundry? How much does it cost to do that same amount of laundry for one year? Make the same calculations for the Warm/Cold setting over a year. How much energy and money could you save using the Warm/Cold setting?

ACTIVITY 21: APPLIANCES: HIGH ENERGY USERS

Overall Objective

Recognize the energy, resource and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.

Activity Objective

Choose three appliances to give up for the purpose of saving money and energy.

Background Information:

The Electrical Energy Association prepared the following wattage chart. This wattage chart gives the approximate power (KWH) consumed by home appliances used for one year under normal conditions.

WATTAGE CHART*

Food Preparation/Preservation	Est. KWH consumed annually
Refrigerator	
(Standard 12 cu. ft.)	728
(Frostless 12 cu. ft.)	1217
Freezer	
(Standard 15 cu. ft.)	1195
(Frostless 15 cu. ft.)	1761
Refrigerator/Freezer (Side-by-Side)	
(Standard 14 cu. ft.)	1137
(Frostless 14 cu. ft.)	1829
Range	1175
Dishwasher	363
Microwave Oven	300
Frying Pan	186
Iron	144
Toaster	39
Blender	15
Mixer	13
Carving Knife	8
Laundry	
Water heater	4219
Washing Machine	103
Clothes Dryer	993
Recreation	
Color Television	502
Black and White Television	362
Radio/Record Player	109
Miscellaneous	
Air Conditioner (room)	1389
Window Fan	170
Clock	17
Hair Dryer	14
Sewing Machine	11
Toothbrush	0.5

*Adapted from J.C. Penney Energy Packet Spring/Summer 1974.

Directions: Answer the following questions.

1. Examine the Wattage Chart. Which appliances use the most energy? Which appliances use the least energy?

2. How much energy do the three appliances which you would be least willing to give up use in one year?

Appliance		Wattage
____________________		______
____________________		______
____________________		______
	TOTAL	______

How could you save energy when buying these appliances?

How could you save energy when using these appliances?

3. How much energy would you save by not using the three appliances you decided to give up?

Appliance		Wattage
____________________		______
____________________		______
____________________		______
	TOTAL	______

4. Which items would you eliminate to save 500 KWH yearly?

Appliance		Wattage
____________________		______
____________________		______
____________________		______
	TOTAL	______

5. Would you be willing to give up these appliances to save energy? Why?

ACTIVITY 22: MAKING CHOICES

Overall Objective

Recognize the energy, resource and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.

Activity Objective

Choose 3 appliances you could do without in order to save energy and resources.

Directions*

1. List 10 electrical appliances in your home.

____________________ ____________________

____________________ ____________________

____________________ ____________________

____________________ ____________________

____________________ ____________________

2. If you had to use less electricity, cross out the three appliances you would be most willing to give up.

3. Circle the three appliances which you would be least willing to give up.

4. Look over your list and discuss your decisions. What made you decide which three appliances to give up? To keep?

*Adapted from J.C. Penney ENERGY PACKET, Spring/Summer 1974.

ACTIVITY 23 THE ENERGY GUIDE

Overall Objective:

Recognize the energy, resource and economic advantages of practicing Voluntary Simplicity of lifestyle as opposed to traditional lifestyle practices.

Activity Objective:

Identify the economic and energy advantages of using the Energy Guides when purchasing an appliance.

Homework Assignment:

Over the next few days, examine the Energy Guide on three different models of clothes washers from the same manufacturer and three different manufacturers that offer models with similar features and wash load capacities. Fill in the chart below with the necessary information and bring back to class.

ENERGY GUIDE CHART

	Name of Manufacturer	A=Model Wash load capacity B=Model Special Features	Average Cost of using the product for one year		Store Price	Store Price plus 10 years of use	
			Water Heater				
			Elect	Gas		Elect	Gas
Three Models from the Same Manufacturer	1. ____	A. ____ B.					
	2. ____	A. ____ B.					
	3.	A ____ B.					
Three Different Manufacturers with Similar Models	1. ____	A. ____ B.					
	2. ____	A. ____ B.					
	3.	A. ____ B.					

Classroom or Homework Assignment:

Take out your Energy Guide Chart and answer the following questions based on the information in your chart.

1. Which model from the same manufacturer costs the most to use for one year?

   Explain why you think this model uses more energy.

2. Which model from the same manufacturer is the most expensive to purchase?

3. Which model from the same manufacturer is the most expensive to buy and run for a period of ten years?

4. Of the three models from the same manufacturer which would you choose for your home and why?

5. Which model from the three different manufacturers costs the most to use for one year?

6. Which model from the three different manufacturers is the most expensive to purchase?

7. Which model from the three different manufacturers is the most expensive to buy and run for a period of ten years?

8. Of the three models from three different manufacturers, which would you choose for your home and why?

ENERGY GUIDE Class Handout

From: U.S. Department of Energy, Washington, D.C., 20545 and
The Soap And Detergent Association

Look for the ENERGYGUIDE label when you purchase major home appliances. Follow these appliance tips to save even more energy and money on presently owned or new appliances.

WATER HEATER: Lower the hot water temperature to 105°F. or 140° with dishwasher. Purchase and install a water heater insulation kit. Turn thermostat down or turn electricity off when on vacation.

CLOTHES WASHERS: Heating water accounts for 85 percent of the energy consumed for hot-water washing. Save money by washing full loads in cold water. Always use cold-water rinse.

DISHWASHERS: A dishwasher consumes the same amount of energy whether washing a full or small load. Save by washing only full loads.

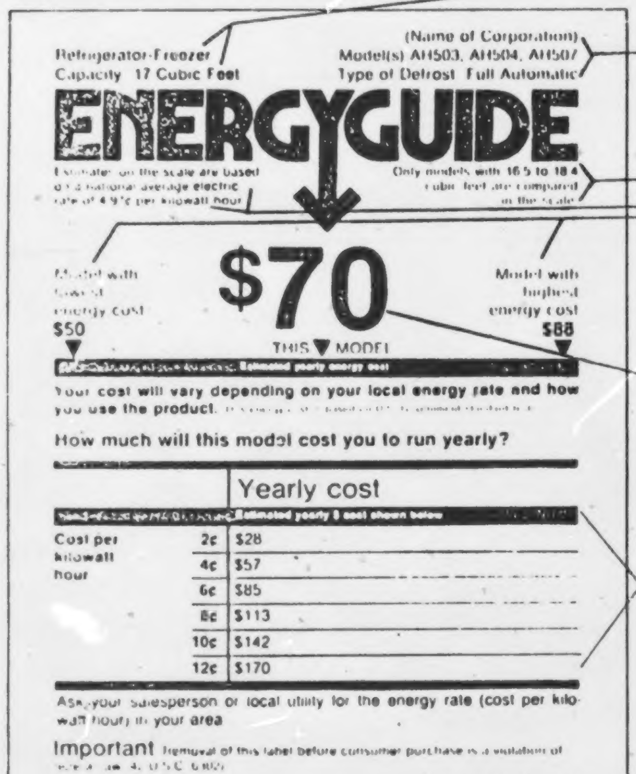
FURNACES: Save 9-15 percent by turning down thermostat at night; changing or cleaning filters regularly; closing drapes at night; servicing annually (in full); sealing house against leaks.

REFRIGERATORS-FREEZERS: More economical when full; don't leave door open; cool hot food before putting in; keep coils clean.

FREEZERS: More economical when full; remove frost buildup regularly; keep coils clean; chest freezer 15 percent more efficient than upright.

HEAT PUMPS: Set at 78° in summer and 65° in winter; service annually; change or clean filters regularly; seal house against leaks; during the winter, don't turn the thermostat down at night.

ROOM AIR CONDITIONERS: Change or clean filter monthly; use fan only when adequate, otherwise set thermostat at warmest comfortable setting; close drapes to block direct sunlight.



Refrigerator-Freezer
Capacity 17 Cubic Feet

(Name of Corporation)
Model(s) AH503, AH504, AH507
Type of Defrost Full Automatic

ENERGYGUIDE

Estimates on the scale are based on a national average electric rate of 4.9¢ per kilowatt hour

Only models with 16.5 to 18.4 cubic feet are compared in the scale

Model with lowest energy cost
$50

$70
THIS ▼ MODEL

Model with highest energy cost
$88

Estimated yearly energy cost

Your cost will vary depending on your local energy rate and how you use the product.

How much will this model cost you to run yearly?

		Yearly cost
		Estimated yearly $ cost shown below
Cost per kilowatt hour	2¢	$28
	4¢	$57
	6¢	$85
	8¢	$113
	10¢	$142
	12¢	$170

Ask your salesperson or local utility for the energy rate (cost per kilowatt hour) in your area

Important Removal of this label before consumer purchase is a violation of [illegible]

Product Catagory
Type/ Size of Product

Product Manufacturer
Product Model Numbers

Capacity range for product comparison

Explains the figures used to determine the average cost of using this product

Highest and lowest energy costs of products falling within this capacity range

Average cost of using this product for one year, based on average use per week

Estimate your personal cost to use this product by determining the local utility costs

ACTIVITY 24 CONSUMER REPORTS

Overall Objective

Recognize the energy, resource and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.

Activity Objective

Evaluate appliances by cost and life expectancy.

Directions: Go to the library and locate the latest issue of Consumer Reports. Look up Washing Machines and copy down the average life expectancy for five different manufacturers models. Go to a large appliance store and find out how much each one costs. Fill in the chart below with your information.

Manufacturer	Average Life Expectancy	Cost	Cost per year
1.	yrs.		
2.	yrs.		
3.	yrs.		
4.	yrs.		
5.	yrs.		

Figure out how much each manufacturer model will cost you per year by dividing the initial cost by the average life expectancy. Which applicance would you buy? Explain.

ACTIVITY 25: THE ENERGY CRISIS COMES HOME

Overall Objective:

Recognize the need to practice conserving energy and resources as they affect each person's lifestyle.

Activity Objective:

List three ways to improve energy use in the home through interior decoration involving textiles.

Directions:

Review the Butterick Multimedia Program: THE ENERGY CRISIS COMES HOME, with the class.

This program contains:

- 1 color filmstrip with cassette
- 8 spirit masters
- 1 wall chart
- teacher's guide

Discuss the following questions with the class:

1. Why is it important to have an energy efficient home?
2. How does the filmstrip show we can improve energy use in the home using interior decoration, that involves textiles?
3. Are there other ways we can save energy using textiles in interior decoration for the home?

Have each student list at least three ways textiles can be used to save energy in the home through interior decoration.

Note: THE ENERGY CRISIS COMES HOME
# C - 926 - 7G $39.00

Butterick Publishing
Maclean Hunter Learning Resources
P.O. Box 4381, Grand Central Station
New York, New York 10017

ACTIVITY 26: RECYCLING TEXTILES FOR THE HOME

Overall Objective:

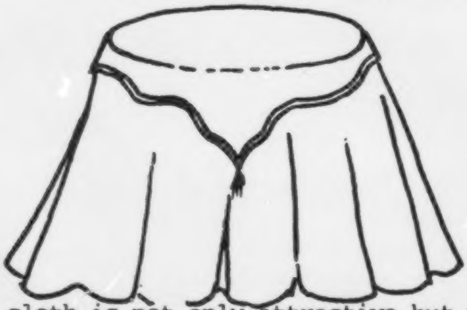
Recognize the need to practice conserving energy and resources as they affect each person's lifestyle.

Activity Objective:

List three ways textiles can be used in the home to decorate and improve energy conservation.

Directions:

Often, textiles intended for one particular household use, may be adapted to profide additional uses. At the same time, the resources used to make the textiles may be recycled to serve another useful purpose. For example, bed sheets have been used for making items such as tablecloths and napkins, draperies, dresses, summer bathrobes, the outer layer of a double shower curtain, slip covers for furniture, and pillows. The fabric is many times still useful even after color schemes and pattern preferences have changed. Here is one way large home textiles may be used:



The two-layered table cloth is not only attractive but practical as well. The top layer can be laundered without leaving the table bare and it takes less energy to clean the smaller layer.

Bring to class an old plain or patterned bed sheet that is no longer being used. (An old blanket may be substituted for the bed sheet and turned into a warm jacket, a sofa throw with pretty edging, a stuffed animal, or a baby blanket.) Check your selection with your parents before bringing it to school. Look through the library on interior design and craft books for ideas on how to recycle your fabric. Bring a list to class of at least three ways you can extend the usefulness of your bed sheet. Make a simple sketch of your idea and review it with your teacher. Complete your project and have a Home Fashion Show.

ACTIVITY 27: WINDOW LOCATION

Overall Objective:

Recognize the need to practice conserving energy and resources as they affect each person's lifestyle.

Activity Objective:

Locate the direction each window faces in student's home.

Directions:

Ask students to determine the direction each window in their home faces. Study the recommended drapery positions for each compass direction. Have students list the rooms in their homes that have windows facing in the directions shown on the chart below.

SUN EXPOSURE CHART

Direction		Home Windows
Southern & Western	Admits most sunlight during the day.	1. 2. 3. 4.
Western	Admits light from the setting sun.	1. 2. 3. 4.
Eastern	Admits direct sunlight in the morning and indirect light the rest of the day.	1. 2. 3. 4.
Northern	Admits only indirect light and is the coldest because it is in the direct path of heavy northern winds.	1. 2. 3. 4.

ACTIVITY 28 IDEA FILE

Overall Objective:

Recognize the energy, resource and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.

Activity Objective:

Over a one month period collect 5 copies of articles that show examples of how energy, money and/or resources can be saved by using Textiles for the Home.

Directions:

For one month have students bring in copies of articles (from books, newspapers, and magazines). Set up a box and start an "Idea File" for using Textiles in the Home to save energy, money and/or resources. The file may be organized by textile type (Rugs and Carpets, Window treatments, Linens) or by room type (Bed Room, Bath Room, Livingroom). Ask students to put their name at the top of the articles they bring into class. At the end of the month, survey the "Idea File" and share the ideas with the class. Plan a bulletin board around the ideas found in the file.

ACTIVITY 29: AT HOME WITH TEXTILES

Overall Objective:	Activity Objective:
Identify and discuss creative solutions to lifestyle problems related to energy, resources, and economics.	Name ten ways textiles can be used creatively in the home.

Directions:

Review the Butterick Multi media program: AT HOME WITH TEXTILES with the class. This program contains:

1 color filmstrip with cassette
8 spirit masters
1 wall chart
teacher's guide

Discuss the following points with the class:

1. What kind of textiles were used in new and creative ways for the home?
2. How and where were these textiles used?
3. How many ways were textiles used in a creative way for the home in the filmstrip?
4. Do you know of other ways textiles can be used creatively in the home?

Have each student list at least ten ways in which textiles can be used creatively in the home.
Ask students to go home and list any of their family's creative uses for textiles in the home. When they return, list on the blackboard those creative solutions collected by the entire class.

Note: AT HOME WITH TEXTILES
C - 925 - 9G $39.00

Butterick Publishing
Maclean Hunter Learning Resources
P.O. Box 4381, Grand Central Station
New York, New York 10017

ACTIVITY 30: HOME DECORATING ACCESSORIES

Overall Objective:

Identify and discuss creative solutions to lifestyle problems related to energy resources and economics.

Activity Objective:

Turn fabric into a simple but creative Home Decorating Accessory.

Directions:

Creating home decorating accessories can be a real challenge and a resource saver if it is done by recycling fabrics from clothing or from other household textiles. In some cases, new products on the market can help. For example, style a shade in a crisp feesible backing that will permanently fuse or stick to fabrics so that they may be used as window shades - or shaped into lampshades, wall hangings, director's chairs, placemats, etc.

Bring in fabric to recycle into a home decorating accessory. Look through current magazines or craft books and choose an idea into which your fabric can be transformed. Plan how this transformation will take place and check it with your teacher. When everyone has completed their project, see if the class can guess what the fabric was originally used for. Share ideas with all class members.

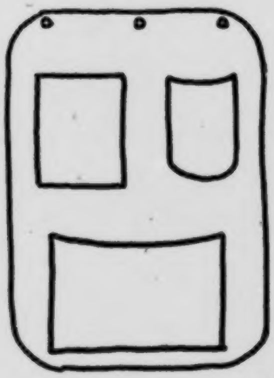
Example:

TURN FABRICS INTO HOME DECORATING ACCESSORIES

Creating home decorating accessories can be done so easily with a quick iron-on application of Style-A-Shade and the addition of trims to tie the look together. Style-A-Shade is a crisp fusible backing for home decorating that will permanently bond to fabrics, transforming them into window and lamp shades, wall hangings, director's chairs, and placemats - the possibilities are endless.

There's something for every room but we've started you off in the kitchen with this easy-to-make wall organizer.

KITCHEN WALL ORGANIZER



Fabric
1/2" wide fold-over bias tape
Style-A-Shade
Fusible tape

1. Determine desired size of wall organizer and sizes of two top pockets. Cut a piece of fabric and Style-A-Shade to each of these dimensions. (Our organizer measures approximately 24" x 36"; pockets measure 10" x 12" and

6 1/2" x 9 1/2").

2. Fuse fabric and Style-A-Shade together, following manufacturer's directions. (Available at fabric and home decorating stores wherever Stacy products are sold.)
3. Fuse or sew bias tape around perimeters of organizer and pockets.
4. Determine size of bottom pocket and double the height measurement, as this will be folded in half. Cut fabric and Style-A-Shade to these dimensions.
5. Fuse fabric and Style-A-Shade together.
6. Fuse or sew bias tape to the two shorter edges.
7. Fold pocket in half; fuse sides together with a strip of fusible web then fuse or sew bias tape to cover raw edges.
8. Attach snaps to pocket corners and to organizer; snap on pocket.
9. Put grommets at top corners of organizer for hanging.

Note: Home Saving News
Fall 1980
page 7.

ACTIVITY 31: HOME EFFICIENCY RATINGS

Overall Objective:

Recognize the need to practice conserving energy and resources as they affect each person's lifestyle.

Activity Objective:

Using the Energy Efficiency Chart, evaluate the use of textiles in the home for the purpose of saving energy.

Directions:

Using the chart below, locate and evaluate the textiles in your home for energy saving efficiency. If improvements are needed, suggest ways to achieve better energy saving efficiency. Suggestions from family members may be added as part of your report.

ENERGY EFFICIENCY CHART

Room	Textile and Location	How could the use of these textiles be improved?
Bedroom # 1		
Bedroom # 2		
Bedroom # 3		
Bathroom		
Livingroom		
Dining Area or Dining Room		
Kitchen		
Other Room Type		

ACTIVITY 32: EDUCATIONAL LEAFLETS

Overall Objective:

Recognize the need to practice conserving energy and resources as they affect each persons lifestyle.

Activity Objective:

Send for 5 educational leaflets that give ideas on saving energy with clothing and textiles.

Directions:

Go to the library, newspapers and magazines and send away for information on how to save energy using clothing and textiles. Start to collect ideas and organize them into a classroom library. Here are some examples.

Saving Energy With Clothing & Textiles,	#23, 50¢ *
How to Make Your Own Warmth,	#49, 30¢
WarmSack,	#50, 20¢
Knit A Scarf, Hat & Mittens,	#51, 20¢
Crochet A Scarf & Mittens,	#52, 20¢

* Prices listed are for 1-24 copies; the charge is less for larger quantities.

These leaflets are available from:

Coats and Clark Inc.
Dept. SIT - E81
P.O. Box 1010
Toccoa, GA 30577

ACTIVITY 33: "ENERGY SAVING IDEAS" SLIDE PROGRAM

Overall Objective:

Identify and discuss creative solutions to lifestyle problems related to energy resources and economics.

Activity Objective:

Describe 3 ways we can dress to keep warm and 3 ways we can dress to keep cool.

Directions:

"Energy Saving Ideas" is a slide program on energy conservation through the use of clothing and textiles. This 20 minute program includes a script and 75 slides. There are fashion photographs of men, women and children which illustrate how to dress to keep warm or cool. Special emphasis is also given to maintaining thermal comfort in the home through furniture, carpet and drapery selection. In addition, there's an Energy Awareness Pre-Test that can be given to your audience before the slides are shown.

To order the slide program contact:

Coats & Clark Inc.
Dept. SIT-E81
P.O. Box 1010
Toccoa, GA 30577

Product number: 2274 A-B
Price: $21.00
For Postage Add 20%

Directions:

Administer the Energy Awareness Pre-Test before showing the slides. Present the slide program "Energy Saving Ideas". After the program hold a class discussion. Identify as many of the energy saving solutions for keeping warm and keeping cool as possible. List these on the blackboard. Add any other ideas given by the students.

ACTIVITY 34: FABRICS, LABELS, AND TEMPERATURES

Overall Objective:

Identify and discuss creative solutions to lifestyle problems related to energy, resources and economics.

Activity Objective:

Given 10 fabric samples and labels students will be able to identify which sample would be appropriate for cold weather and which would be best for warm weather with a 70% accuracy rate.

Directions:

Collect ten fabric samples and attach an information label to each. Use this to test students understanding of what fabrics are best suited for particular temperatures. These fabrics may be for clothing or for the home. Number each sample. Ask students to take out a piece of paper, number it from one to ten, and state whether the sample is appropriate for cold or warm weather and why.

ACTIVITY 35: CLOTHING HABITS

Overall Objective:

Identify and discuss creative solutions to lifestyle problems related to energy, resources and economics.

Activity Objective:

Evaluate the clothing habits of a family member for one week.

Directions:

Observe and evaluate the clothing habits of a family member for one week. Keep a record of how efficiently the person dresses to keep warm in winter or cool in summer. Write down your recommendations for changing their clothing habits so more energy is saved or comfort is given. Report your findings on the chart below.

Day of Week	Clothing Worn to Keep Warm/Cool	Daily Temperature		Recommendations for Achieving Better Efficiency With Our Clothing
		High	Low	
	1. 2. 3. 4. 5.			
	1. 2. 3. 4. 5.			
	1. 2. 3. 4. 5.			
	1. 2. 3. 4. 5.			
	1. 2. 3. 4. 5.			
	1. 2. 3. 4. 5.			
	1. 2. 3. 4. 5.			

ACTIVITY 36: CLOTHING PICTURE SURVEY

Overall Objective:

Identify and discuss creative solutions to lifestyle problems related to energy, resources and economics.

Activity Objective:

Examine and evaluate 5 pictures of people dressed to keep warm and 5 pictures of people dressed to keep cool.

Directions:

Cut out 5 pictures of people dressed to keep warm and 5 pictures of people dressed to keep cool. Attach each picture to the left hand side of a piece of notebook paper. On the right hand side of the paper evaluate the features of the clothing. Determine if the clothing choices would be wise for keeping warm/cool and explain why. Here are some clothing features to look for.

Number of layers
Type of fabric (weight, texture, color)
Waistlines
Necklines (high, medium, low)
Sleeves (long, short, no sleeves)
Accessories (belts, scarves, gloves, hats)
Shoes (sandels, boots, loafers)
Lengths (of coats, skirts, pants, jackets, tops)

Ask yourself: What would you add to keep warm? Why?
What would you remove to keep cool? Why?

ACTIVITY 37: KEEP WARM or KEEP COOL - DEMONSTRATION

Overall Objective:

Identify and discuss creative solutions to lifestyle problems related to energy, resources and economics.

Activity Objective:

Evaluate student demonstrations for keeping warm or keeping cool.

Directions:

Divide the class in half. Ask the students in one half to use their present wardrobes to demonstrate how to keep warm. The other half of the class would demonstrate an example of how to keep cool. Each student must present their demonstration with a justification for their clothing choices and/or suggestions for how they might be able to improve on their own clothing choices. After their presentation the class may be invited to make suggestions for improving their clothing choices to better save on energy and improve body comfort.

ACTIVITY 38: USED CLOTHING STORES

Overall Objective:

Recognize the energy, resource and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.

Activity Objective:

Survey the Community stores and locate those that sell used clothing.

Directions:

Explain the advantages and disadvantages of purchasing used clothing. Ask students to locate any store or other source where used clothing may be found. Get the following information about each store:

Name:

Location:

Type of Merchandise:

Policies for Buying or Selling Clothing:

Here are some examples of where used clothing can be found.

Thrift Shops
Second Hand Stores
Flea Markets
Swap Marts
Goodwill
Salvation Army
Garage Sales

ACTIVITY 39: CLASS GARAGE SALE

Overall Objective:

Identify the personal reward and value in making the choice to seriously practice simplifying one's lifestyle.

Activity Objective:

Plan and execute a class or school garage sale.

Directions:

Have students bring in 2 items to sell at a garage sale. Mark items with the sellers initials, at no more than 25% of what a comparable new item would cost. Put a few tables together and place tagged merchandise on it. Invite the class to purchase items. Keep a record of what is sold and at the end of the day, return unsold items and/or money made from the sale to the right class members. If this is to be done on a school wide basis, get school board permission and consider donating the proceeds toward a school project or charity.

ALTERNATIVE ACTIVITY: FREE STORE

Directions:

Have students bring in a bag of unwanted items. Invite the class to exchange items from their bag for items in other students' bags. Barter is the only permissible method of exchange. No money is allowed to be used.

ACTIVITY 40: CONSULTANT FOR SECOND HAND CLOTHING

Overall Objective:

Recognize the energy, resource and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.

Activity Objective:

Write a paragraph summarizing the presentation on Second Hand Clothing by an invited speaker.

Directions:

Invite a speaker from Goodwill, the Salvation Army or other used clothing retailer to address the topic of "Second Hand Clothing, A Hidden Treasure". Ask the speaker to cover the following points in his/her presentation.

1. Why sell used clothing?
2. What happens to used clothing when it comes into his/her establishment?
3. Who buys used clothing?
4. Who provides the used clothing they sell?
5. To get the most from second hand clothing what should people look for?

After the presentation invite the class to ask questions. Then ask the class to write a paragraph summarizing the speaker's presentation.

ACTIVITY 41: RENEWED CLOTHING

Overall Objective:

Identify the personal reward and value in making the choice to seriously practice simplifying one's lifestyle.

Activity Objective:

Renew one article of second hand clothing to give it a longer, useful life.

Directions:

Purchase an article of used clothing or bring in a discarded clothing item from another family member. Examine the item and decide what could be done to give it new life. Plan the procedure, equipment and materials needed to renew your garment. Check the plan with your teacher. When your project is complete, show your "new" garment to the class and provide the following information in your oral report.

Where you got the item.
What you decided to do to give it renewed life.
How did you improve your garment?
Would you consider doing something similar to renew another garment? Why?

ACTIVITY 42: CLOTHES SWAP

Overall Objective:	Activity Objective:
Identify the personal regard and value in making the choice to seriously practice simplifying one's lifestyle.	Swap an item of clothing you no longer want with a class mate.

Directions:

Bring an item of clothing you no longer want to class. Trade clothing items with a class mate. Determine if the item can be worn without any changes, or if repairs or alterations are necessary. Enjoy wearing the "new" addition to your wardrobe. (If you do not have a clothing item to trade, bargain for a service - like a car wash, a pan of brownies, tutoring in algebra or geometry, or typing a paper.)

ACTIVITY 43: REDESIGNED CLOTHING

Overall Objective:

Identify and discuss creative solutions to lifestyle problems related to energy, resources and economics.

Activity Objective:

Redesign one article of clothing for the purpose of renewing its usefulness.

Directions:

Choose an item of your own clothing that you have not worn for over a year, and bring it to class. Look for ideas for ways to redesign your garment in the library, bookstores, newspapers, and magazines. If the garment is too small, incorporate into your design ways to increase the size, or redesign it for a smaller member of your family. Review your new design with your teacher. Plan your procedure, any additional material, trim, or appliques, and the equipment you will need. After completing your project, share your design ideas with the class. Explain why you decided to choose the method used to renew garment usefulness.

ACTIVITY 44: KNOW YOUR CLOTHES

Overall Objective:

Recognize the need to practice conserving energy and resources as they affect each person's lifestyle.

Activity Objective:

List 3 things you want clothing to do for you. List 3 things you want to do for your clothing.

Directions:

Ask the class to list what they want their clothing to do for them. Here are some ideas.

Comfort (Warm in Winter, Cool in Summer)
Good looks
Good fit
Unrestricting
Reflect their personality and uniqueness
Compliment their Body Shape
Long Lasting

Then ask what the class wants to do for their clothing. This might be:

Easy Care
Little time, energy, or money
Easy to store
Dry Clean
Home Laundry
No Ironing

Now answer the following questions. How do you plan to achieve what you want from clothing and what you want to do for your clothing? Will you have to make some trade offs? Which will save energy?

ACTIVITY 45: CLOTHING REPAIR

Overall Objective:

Recognize the energy, resource and economic advantages and disadvantages of practicing Voluntary Simplicity of Lifestyle, as opposed to traditional lifestyle practices.

Activity Objective:

Repair one item of clothing to increase the garment's lifespan.

Directions:

Ask students to bring in one garment that needs a repair. Have students determine what the repair is and what materials and equipment are necessary to make the repair. Review the repair and procedure with each student. When repairs are complete have students write a short report on what the repair was and how it was accomplished. Repairs may include replacing a button, repairing a button hole, turning a collar or cuffs, patching elbow or knee areas, patching a tear or covering a burn mark.

ACTIVITY 46: WARDROBE INVENTORY

Overall Objective

Identify the personal reward and value in making the choice to seriously practice simplifying one's lifestyle.

Activity Objective

List clothing items that belong to each student and assign an average value to each item to find out how much money has been invested in their wardrobes.

Directions:

Using the attached Wardrobe Inventory, ask students to count the number of garments and accessories in their closets, dressers or chest of drawers, shelves and on door hooks. In addition ask students to investigate the current prices on a particular kind of clothing. Make sure all kinds of clothing listed in the Wardrobe Inventory Chart are being investigated by the class. After each student fills in their chart, have them share the information they collected on current clothing prices. Base clothing values on price averages if cost is not known. Ask students to figure out what it would cost to replace their wardrobes today. By finding out how much is already invested in our wardrobes, we can better justify getting our money's worth out of the clothing we already have.

WARDROBE INVENTORY

Kind of Clothing		Number	Average Cost	Value
COATS:	For Cold Weather			
	For Warmer Weather			
	For Rain wear			
JACKETS:	For Cold Weather			
	For Warmer Weather			
	For Rain wear			
SUITS:	Jacket and Pants			
	Jacket and Skirt			
	3- piece			
SHIRTS:	Long Sleeve			
	Short Sleeve			
BLOUSES:	Long Sleeve			
	Short Sleeve			
PANTS:	(Not Jeans)			
JEANS:	Better Ones			
	Old Ones			
SWEATERS:	Pull over			
	Button down			
	Vest			
VESTS:	Other than with suits			
DRESSES:	Everyday			
	Sunday best			
	Semi Formal			
	Formal			
UNDER GARMENTS	Mens T-shirts			
	Mens Underwear			
	Womens Bras			
	Womens Underwear			
	Womens Slips			
	Pantihose			
	Long underwear			
SHOES:	Tennis shoes			
	Sandels			
	Loafer styles			
	Dress shoes			
	Slippers			

WARDROBE INVENTORY (cont'd)

Kind of Clothing		Number	Average Cost	Value
NIGHT CLOTHES	Pajamas			
	Nightgown			
	Robe			
SOCKS:	Long			
	Short			
CASUAL WEAR	T-Shirts			
	Tops			
	Shorts			
ACCESSORIES:	Ties			
	Scarves			
	Hats			
	Gloves			
	Mittens			
	Ribbons			
	Barretts			
	Handkerchiefs			

Use additional space for calculations:

ACTIVITY 47: SCOUT THE STORES

Overall Objective:

Identify the personal reward and value in making the choice to seriously practice simplifying one's lifestyle.

Activity Objective:

Locate 2 or 3 stores in your area that carry the style of clothing best suited for your chosen career.

Directions:

Ask students to choose a career they think they would like to pursue in the future. One way to organize and plan a shopping trip is to scout the stores before making any purchases. This helps prevent shopping errors. Have students scout the stores in their area and choose 2 or 3 which they feel carry clothing appropriate for their chosen career. Answer the following questions about each store:

Name:
Location
Type of Clothing:
Payment Policies:
Customer Services:
Return Policies:
Why does this store's merchandise seem appropriate for your chosen career?

Give a brief description of the kind of clothing you think you will be wearing in your chosen field.

ACTIVITY 48: CLOSET ORGANIZATION

Overall Objective:

Identify and discuss creative solutions to lifestyle problems related to energy, resources and economics.

Activity Objectives:

Evaluate the use of space in the clothes closet.

Directions:

Ask students to make a neat drawing of their clothes closet. Show correct proportions of wall length, width and height to that of the door(s), pole and shelve(s). Review each sketch and ask students to think of creative ways they can get better use of the closet space they already have. Make a list of these suggestions on the board. Now ask students to re-design their own closets using the class suggestions as a guide. Upon completion, share the old and new designs with the class.

ACTIVITY 49: INVITE A CONSULTANT

Overall Objective:

Identify and discuss creative solutions to lifestyle problems related to energy, resources and economics.

Activity Objective:

List 5 ways to recognize quality in clothing.

Directions:

Invite a wardrobe consultant from an area department store to come in, with examples of merchandise, and address the topic: "Quality Clothing - What to Look For." If the consultant cannot come to school, ask if a field trip to the store can be arranged. After the presentation ask students to list all the ways to recognize quality in clothing.

ACTIVITY 50: FASHION SHOW

Overall Objective:

Identify and discuss creative solutions to lifestyle problems related to energy, resources and economics.

Activity Objective:

Evaluate the garments in a fashion show for quality, fit, and career appropriateness.

Directions:

Attend a local Fashion Show or plan a Fashion Show that focuses on the Career Wardrobe. Evaluate each outfit for the following:

1. Career Appropriateness
2. Proper Fit
3. Quality Fabric
4. Quality Construction
5. Outfit Coordination

Give reasons for your evaluations.

ACTIVITY 51: PRICE A CAREER WARDROBE

Overall Objective:

Identify and discuss creative solutions to lifestyle problems related to energy, resources and economics.

Activity Objective:

List and price the clothing items needed for a professional career for one 5 day work week.

Directions:

Using the Wardrobe Inventory as a guide (Activity #41), price a career wardrobe that would allow you to have enough clothes changes to last one week. Check for prices at local stores, in store catalogues, and newspaper ads. Don't forget to add accessories to your total. Use the following chart to help you.

CAREER WARDROBE

Number	Item	Price Per Item	Total
		Grand Total:	

ACTIVITY 52: SELECT A CAREER

Overall Objective:

Identify some of his/her future goals, noting those which are compatible with Voluntary Simplicity and propose some ways of reaching these Voluntary Simplicity related goals.

Activity Objective:

Write a 2 page paper describing and justifying the wardrobe requirements for a selected career.

Directions:

Look through the newspaper want ads on job announcements. Choose a job you could see yourself doing in the future. Clip out the ad. Find out all you can from the potential employer about the activities and responsibilities connected with this job. Perhaps the company has a brochure that will give you clues about the image they try to project. Your guidance counselor may have information about the career choice as well. After you research the career, plan an appropriate wardrobe that will cover a weeks worth of job related activities. In a 2 page paper present the following information:

Newspaper:
  Clipping about the job.
  Activities and responsibilities connected with the job.

Wardrobe Selections:
  Justify why the wardrobe selections were made.

RESOURCE LISTING

1) Audio-Visual Materials

The Energy Crisis: Some Implications and Alternatives
American Association for the Advancement of Science Audiotape Program
Dept. QA
1515 Massachusetts Avenue, N.W.
Washington, D.C. 20005

This is a three-hour taped dialogue between noted authorities which examines components of societal energy demand. Ideas or changing life-styles to reduce energy demand are explored.

Energy: A Matter of Choices
Encyclopedia Britannica Ed. Corp.   16mm Film
425 N. Michigan Ave $290.00/$17.00 rent
Chicago, IL 60611

Focusing on the shortage of electrical power this film examines the social attitudes and technological forces which have led to the crisis. This twenty-two minute film then suggests alternatives which could help overcome the crisis.

Energy: the Dilemma
Churchill Films   16mm Film
662 N. Robertson Blvd. $1,500.00
Los Angeles, CA 90060

This is a presentation of energy growth patterns -- past, present, and future. Problems of supply and demand are explored as well as our economics and social dependency on these evaporating fuel sources.

Energy: Impact on Values and Lifestyles
Current Affairs   Filmstrip
24 Danbury Road $24.00
Wilton, CT 06897

The end of an era of abundant and relatively cheap energy has far-reaching implications for national needs and individual aspirations. This filmstrip assesses the impact of more expensive energy and energy shortages of life-styles, societal patterns, and existing values.

Saving Energy at Home
Ramsgate Films   16mm Film
704 Santa Monica Blvd. $180.00
Santa Monica, CA 90401

This film pinpoints major sources of energy waste around the house. It provides specific tips on how to cut down on home energy consumption and fuel bills.

2) Books

Callenback, E., Living Poor with Style. New York: Bantam Books, 1972. pp. 262-293, price: $1.95/paperback.

This is a practical and researched information book on real and positive ways of creating a happier, more satisfying lifestyle, whether you are poor or not.

Clark, W., Energy for Survival: the Alternative to Extinction. New York: Anchor Press, Division of Doubleday and Company (245 Park Avenue, 10017), 1974. Price: $4.95/softbound.

Crown, F., How to Recycle Old Clothes into New Fashions. Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1977. Ideas and instructions on how to recycle clothing by clothing type, i.e. dresses, pants, coats, children's clothes.

Elgin, D. Voluntary Simplicity: Toward a Way of Life That is Outwardly Simple, Inwardly Rich. West Caldwell, NJ: Morrow, William and Co. Inc. (6 Henderson Drive, 07706), 1981., $4.95.

Farber, E.A., Wiggens, D.B., Posris, F.I., and Murdock, J.A. North Florida Residential Energy Audit Workbook. Tallahassee: Governor's Energy Office. Workbook for residents of North Florida that presents a step-by-step process for figuring out energy use in the home with useful information on energy conservation.

Fritsch, A.J., Hogan, B.O., Darcy, D.J., Taylor, D.E. and Csaky, A.S., 99 Ways to a Simple Lifestyle. Garden City, NY: Anchor Books, 1977. Price: $3.50/paperback. Practical advice, categorized by topics for use of our resources.

Kranzberg, M., Hall, T.A. and Schreber, (Ed.). Energy and the Way We Live. San Francisco: Boyd & Fraser Publishing Co., 1980. Technical text built on a series of articles gives some helpful thoughts for saving energy.

Springer, G.S. The Energy Saving Guidebook. Westport, CT: Technomic Publishing Co. (265 Post Road West, 06880), 1974. Price: $8.50. Whatever your lifestyle, you can benefit from increasing the efficiency of your energy consumption. Specific data are offered showing the results you will get by following suggested steps.

The Simple Living Collective American Friends Service Committee, Taking Charge: Achieving Personal and Political Change Through Simple Living. San Francisco: Bantam Books. Price: $1.95/paperback. A general introduction to simple living, touching on the implications of and consciousness raising that occurs in simple living.

The University of Tennessee Environment Center, Ideas and Activities for Teaching Energy Conservation: Grades 7-12. Knoxville, 1977. A series of activities are presented to aid the energy conservation education effort.

Tortora, P.G. Understanding Textiles. New York: MacMillan Publishing Co., Inc., 1978. Standard textbook on textiles.

Vale, B. and Vale, R., *The Autonomous House: Design and Planning For Self Sufficiency*. New York: Universe Books (381 Park Avenue South, 10016). Price $10.00/clothbound or $4.95/ paperback. Two architects offer practical solutions to the building of a house that operates independently within its immediate environment. This book is suitable for individual study or class projects.

3) Magazines

National Geographic Society. A special Report in the Public Interest: *Energy, Facing Up to the Problem, Getting Down to Solutions*. Washington, D.C. (Depat. 5000, 20036), February 1981. 10 to 99 copies $1.15 each; 100 or more, $1 each.

4) Pamphlets

Birchfield, J.L., Combes, R.S., and Olson, L.H. *Advantages of Carpet and Rugs in Energy Conservation*. American Textile Manufactureers Institute, Carpet and Rug Institute, Carpet Cushion Council, Carpet Manufacturers Association of the West, Carpet Yarn Association, and Man-Made Fiber Producers Association. Technical report on various combinations of carpet and padding insulating abilities.

Carpeting. J.C. Penney Company, Inc.: Consumer Affairs Department, 1979. Basic information is presented in this pamphlet.

Channing L. Bete Co., Inc. *What Everyone Should Know About the Quality of Drinking Water*. Greenfield, Mass., 1977.

Decorative Wall Coverings. J.C. Penney Company, Inc.: Consumer Affairs Department, 1978. Basic information is presented in the pamphlet.

Drapery Fabrics. J.C. Penney Company, Inc.: Consumer Affairs Department, 1978. Basic information is presented in this pamphlet.

Florida Department of Environmental Regulation. *Drinking Water*. Twin Towers, 2600 Blair Stone Road, Tallahassee, Florida, 32301.

Florida Department of Environmental Regulation. *Nonpoint Source Pollution*. Twin Towers, 2600 Blair Stone Road, Tallahassee, Florida, 32301

Florida Department of Environmental Regulation. *Permitting* Twin Towers, 2600 Blair Stone Road, Tallahassee, Florida, 32301.

Florida Department of Environmental Regulation. *Wetlands.* Twin Towers, 2600 Blair Stone Road, Tallahassee, Florida, 32301

Hackler, N. Laundry Techniques to Save Energy. Gainesville: University of Florida, Cooperative Extension Service. An excellent bulletin, in easy to understand language with very helpful pictures, that presents energy saving laundry techniques.

Harris, S. and Avery, C. Dressing Cool When You Feel the Heat. Tallahassee: Institute of Science and Public Affairs. Florida State University, May 1980. This presents helpful ideas for using our clothing efficiently in hot weather, backed by more technical information.

Hartung, P.F. Keeping Warm With Less Fuel. Eash Greenwich RI: Hartung Product Design Service, (Dean Bldg., 655 Main St., 02818), 1974. Price: $1.00 per single copy; substantial discount for quantity orders. This booklet deals with innovative ways of maintaining personal comfort with lower home temperature. It is useful as a basis for discussion of construction and energy issues or for individual projects.

Home Energy Checklist. Tallahassee, FL: Governor's Energy Office. Small folder presents helpful hints for saving energy.

How Thermostat Settings Affect Operating Costs. Orlando: Orlando Utilities Commission. One page explanation on how temperature setting affect energy costs.

Keep Your Cool at 78°. Tallahassee: Governor's Energy Office.

Make Over Ideas for the Entire Family. Stanford, CT: Coats and Clark, 1976. Book No. 253, price 50¢. How to make over sweaters and knit ties for men and women.

National Water Well Association. Ground Water Pollution Control. 500 West Wilson Bridge Road, Suite 135, Worthington, Ohio, 43085.

Resilient Flooring. J.C. Penney Company, Inc.: Consumer Affairs Department, 1978. Basic information is presented in this pamphlet.

Saving Energy with Clothing and Textiles. Stanford, CT: Coats And Clark, Inc., Vol. 49, No. 2R, pp 2-6. Excellent source, which includes clothing and textiles for the home in its presentation.

The Electric Washer and Dryer Explained. Tampa: Tampa Electric Co., PA: 8/79. Small card with basic information presented.

The Electric Water Heater Explained. Tampa: Tampa Electric Co., PA: 8/79.

United States Department of Energy. *Development of the Strategic Plan for Industrial Energy Conservation*. Washington, D.C.: Office of Conservation and Solar Applications, Division of Industrial Energy Conservation. Technical report covers all of industries energy use and conservation efforts.

United States Department of Energy. *Low Cost -- No Cost Energy Saving* Washington, D.C.: Department of Energy, 20585. CS-330.

United States Department of Energy. *Tips for Energy Savers*. Washington, D.C.: U.S. Government Printing Office, DOE/OPA 0037, September 1978. Booklet covers home activity energy saving ideas.

United States Environmental Protection Agency. *Acid Rain*. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (#055-000-00198-7).

United States Environmental Protection Agency, *EPA Journal Reprint: State of the Environment*. *6*(1), Jan. 1980. Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

United States Environmental Protection Agency. *Is Your Drinking Water Safe*? Office of Public Affairs (A-107), Washington, D.C., 20460, March, 1977.

United States Environmental Protection Agency. *Water: A Resource You Can Help Restore*. National Recreation and Park Association, Arlington, Virginia and Design Communication Collaborative, Washington, D.C.

What Do You Wear to an Energy Crunch? Tallahassee: Governor's Energy Office.

5) Articles

Avery, C.E. Unpublished Report, Submitted to State of Florida, Office of the Governor, Governor's Energy Office, October 6, 1980. Report looks at dressing to keep warm and cool in Florida's climate.

Clifford, D. Buying quality saves money. *Tallahassee Democrat*, January 18, 1981, pp. G1;G3. Article on quality in today's fashions.

Clifford, D. The Classic Look Mades the Man. *Tallahassee Democrat*. January 18, 1981, pp. G1;G3. Article on developing the basic wardrobe for the young executive.

Cook, F.L., Dawking, J.E., Brookstrin, D.S., Carter, W.C., Fulford, R.H. Lowry, J.F., Murphy, M.M. and Tincher, W.C. *Energy Conservation in the Textile Industry*. Springfield, VA: Energy Research and Development Administration, National Technical Information Service, U.S. Department of Commerce 22161; No. ORO - 5099 - T1. Technical report touches on energy conservation efforts of the textile industry.

Culp, B. Adapting to Changed Home Temperatures Through Clothing Choices. Proceedings of the 1979 Association of College Professors of Textiles and Clothing. Research report summary.

Eslick, F.T. A look at Energy Conservation in the U.S. Textile Industry. Canadian Textile Journal, 1978, 95, 63-65. Technical article examines energy conservation efforts of the U.S. textile industry.

Harris, N. Textile News: The Energy Situation. Family Economics Review, United States Department of Agriculture, Summer 1974, p. 8. Article emphasizing the use of textiles to save energy.

Haupert, D. and Shindelar, C. Energy-smart Window Coverings. Better Home and Gardens, November, 1980, pp. 41-45. Examples of new products on the market are given to save energy.

How to Get Your Money's Worth from the Clothes You Already Have. Family Circle, June 3, 1980, pp. 18;20;22;24. This excellent article presents a formula for getting the most from our wardrobes.

Merrs, M. For a Fashionable Fall. Tallahassee Democrat, August 21, 1980, pp/ 1-10. Article on fall fashions for 1980 based on classic styles.

O'Reilly, L. & Rucker, M. Characterization of the Direct Market in Used Textile Products. Proceedings of the 1979 Association of College Professors of Clothing and Textiles. pp. 173-174. Research report summary.

Sanders, R. Smart Shopping - When to Go, What to Know. Home Sewing News. Palmer, Massachusetts; Home Sewing Association, Inc., Fall 1980, 22, 2. A few shopping tops are given in this article.

Scruggs, B.J. Laboratory Measurement and Evaluation of Thermal and Selected Comfort and Durability Properties of Twelve Textile Fabrics Intended for Indoor Winter Wear with Lowered Temperatures. Proceedings of the 1979 Association of College Professors of Clothing and Textiles. pp. 87-88. Research report summary.

Suchecki, S.M. Conserving Textiles' Energy Sources. Textile World, 1977, 127, 37-66. This article looks at the amount of petroleum used by the textile industry and consequences if supplies were low.

Steadman, R.G. Keeping Warm and Saving Energy. Proceedings of the 1979 Association of College Professors of Clothing and Textiles. pp. 133-148. Research report summary.

The Soap and Detergent Association. Energy Guide Labels Introduced For Appliances. Cleanliness Facts, July/August 1980, pp. 6,7. Brief article on the new energy guide lables.

Vigo, T.L. & Hassenboehler, D.B. Effective Use of Textiles for Energy Conservation. Energy Conservation in Textile and Polymer Processing. Washington, D.C.: American Chemical Society, 1979, pp. 256-271. Textile processes are evaluated for energy use.

Wallengerger, F.T., Slack, A. & Wentz, M. The Effect of Fabric Composition on Energy Demand in Home Laundering. Textile Chemist and Colorist, 1980, 12, 158-161. The home drying process is measured for energy use needed for 100% cotton vs. 100% polyester fabrics.

Why We Must Act Now. Newsweek, July 16, 1979, p. 23. This article presents our current energy resources and the time span equated to their availability.

6) Composite Listing of Voluntary Simplicity-Related Materials

Public Affairs, Chevron, U.S.A.
Chevron, U.S.A., Inc.
555 Market St.
San Francisco, CA 94105
Many booklets are available from Chevron on energy and conservation. These are free but only available in single copies.

Educational Resources Information Center (ERIC)
ERIC/SMEAC
1200 Chambers Road.
Columbus, OH 43212
ERIC offers easy access to reports of innovative programs, curriculum materials, conference proceedings, bibliographies, outstanding professional papers, and reports of significant efforts in educational research and development. The Columbus Ohio clearing house specializes in science, mathematics, and environmental education. It is suggested that the center be contacted for further information on this service.

EARS Energy Catalogue
Environment Action Reprint Service
2239 East Colfax
Denver, CO 80206
The EARS Catalogue offers a large selection of books, pamphlets, plans, and graphic material. These focus on energy, conservation, and the environment. Free in single copies (postage donations appreciated).

Fowler, John. Energy Environment Sourcebook.
National Science Teachers Association $4.00
1741 Connecticut Ave.
Washington, D.C. 20009
The source book was written for teachers in an informal style and includes quantitative information, tables and illustrations. Technical appendices and a glossary extent its usefulness.

Harrah, D. & Harrah B. Conservation/Ecology: Resources for Environmental Education.
Scarecrow Press, In.c
52 Liberty Street
P.O. Box 656 1975
Metuchen, NJ 08401 $12.00
This is designed to be a practical bibliography reference to a wide range of conservation-sociological teaching materials and ideas. (Books, agencies, periodicals, glossary of terms, and legislation).

Hendershot Bibliography
4114 Ridgewood
Bay City, MI 48706 Level K-12
Herdershot Bibliography is a resource for locating programmed instruction materials that may be published by many companies. Programmed materials in energy education are available at varying prices.

Composite of Energy Curriculum Guides and Enrichment Material
Mobile County Public Schools
P.O. Box 1327
Mobile, AL 36601 (available only in Alabama -- free)
This is a composite listing of energy curriculum guides and enrichment materials including name and address of sources. It is structured to provide teachers a ready reference to supplementary materials available for utilization in their core instructional program.

Energy References Sources
Oregon State University Press
101 Waldo Hall Level 10-12
Corvallis, OR 97331 $2.00
This is a reference source for energy information. It is designed for use in research as well as for students and teachers.

National Technical Information Service (NTIS)
5285 Port Royal Road
Springfield, VA 22161
The NTIS of the U.S. Department of Commerce is the central source for the public sale of S.S. and foreign government sponsored research, development and engineering reports prepared by governmental agencies, their contractors, grantees, or by special technology groups. NTIS information collection exceeds one million titles and all are for sale at agency cost. To receive information on the availability of energy-environmental issues material write to the above address. NOTE: The Environmental Protection Agency Publications Bibliography (Quarterly Abstract Bulletin) is available through NTIS.

Roky, John. Energy Related Literature List.
3703 Narsaw Drive Level 10-12
San Diego, CA 92115 $1.00
This is a listing of out-of-print and current literature on all aspects of energy. It is a useful source of background material and information.

Sampler -- Energy and Man's Environment.
0114 SW Hamilton, Suite 301
Portland, OR 97201 Free
The Sampler is a collection of energy and conservation education materials. It is teacher developed, multidisciplinary, and contains clear objectives and activities.

Energy in the U.S.: Bibliography and Study Questions.
The Foundation for Economics Education, Inc. Level 10-12
Irvington-on-Hudson, NY 10533 $ .25
This material was originally prepared for use by debaters and coaches. It discusses the economics of production and use of energy and lists background references.

Environmental Conservation Education: A Selected Annotated Bibliography.
The Interstate Printers & Publishers, Inc. Level K-12
19-27 North Jackson St. $2.50/paperbound
Danville, IL 61832 Educ. Disc. Available
This is a bibliography of environmental education materials. It is designed specifically for school use.

U.S. Department of Energy, Energy Education Materials Inventory, Vol.I.
Superintendent of Documents $11.25
Washington, D.C., 20402

United States Government Printing Office
Superintendent of Documents,
Washington, D.C. 20402
The U.S. Government Printing Office offers an extensive range of energy related publications and information. This inclused material on energy legislation and committees, research, alternative energy sources, conservation strategies, forecasts, and bibliographies. The price for this material varies from less than $1.00 to $10.00. By writing to the above address, one can obtain free of charge, copies of the Subject Bibliography Index and Price List 36 which contain all necessary information for selecting material pertinent to energy-environmental issues. Notification Key: N554.

7) Other Teaching Materials

Suggestions for Teaching Energy Conservation in Home Economics
Alabama Department of Education
State Office Building
Montgomery, AL 36130 Free
This curriculum guide is designed to aid in developing home-use energy conservation curricula. It contains ideas and techniques for classroom teaching and related activities.

Conservation of Energy: Teacher's Activity Guide.
Louisiana State Department of Education
P.O. Box 44064
Baton Rouge, LA 70804
This guide contains suggested activites for use in energy education curricula. It can also be used to present background material.

Energy Crisis: A Teacher's Resource Guide
New Jersey Education Association
180 West State Street — Free
Trenton, NJ 08608 — (only available in NJ_
This guide contains objectives, background content, activities, and references for energy education. It is designed to be used in any class room

Energy Primer
Tennessee Valley Authority
Chattanooga, TN 37401
This teacher's supplement provides general information on energy sources, supply, and efficient uses. Emphasis is on the immediate TVA area.

Smith, T.W. et. al. Household Energy Game
Sra Grant College Program
University of Wisconsin
Madison, WI 53706 — $15.00
This game is designed to help computation and reduction of energy usage. Consumption is compared to national and world averages.

Home Economics Curriculum Sampler
Selected by:
David E. LaHart
Florida Solar Energy Center
300 State Road 401
Cape Canaveral, FLorida 32920

This publication contains selected curriculum units which include objectives and activities for specific topics.